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# *The* DOMESTIC BEEKEEPER

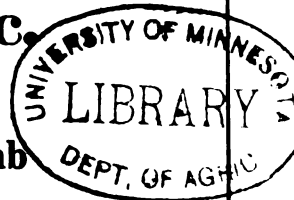
SUCCESSOR TO  
*The Bee Keepers' Review*

## The Duffy-Diehl Inc.

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**The MacDonald Aluminum Honeycomb**



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Can not be  
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Prevents loss by  
melting.

Makes extraction of  
heavy honey easily  
accomplished.

Lasts forever with  
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**"Prompt and  
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The Aluminum Honeycomb is uncapped the same as the wax comb. Note how bees have built on capping.

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## January 1921

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BINDERY APR 17 53

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### ITALIAN BEES

(The kind that fill from two to six supers)

In eight and ten frame hives at \$12.00 and \$15.00 each. Bees shipped by express in April.

Orders booked now with part payment.

Also have comb-honey for sale at \$3.25 per case of 12 boxes.

S. C. R. I. Red Ckls. at \$3.00, \$4.00, and \$5.00 each.

Eggs for hatching (280 egg Trapnested Strain) \$2.50 per 15, \$12.00 per 100.

**Miss Lulu Goodwin**

**MANKATO, MINN.**

## Marshfield Goods

Are made right in the timber country and we have the best facilities for shipping: **DIRECT, QUICK and LOW RATES.**

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping cases are dandies.

Ask for Catalogue of Supplies free

**Marshfield Mfg. Co.**  
**Marshfield, Wis.**

We have first-class basswood comb-honey shipping case, complete with glass and corrugated paper, 67½c each, without glass 65c each.

### Friction Top Pails all ready for delivery at Newark, New York

2½	pound cans, f. o. b.....	\$ 6.50 per hundred
3	pound cans, f. o. b.....	7.00 per hundred
5	pound pails, f. o. b.....	10.70 per hundred
10	pound pails, f. o. b.....	16.00 per hundred

The above prices are f. o. b. Newark, or \$1 per hundred less f. o. b. Baltimore, Md.

Now is a fine time to gather up your old combs and ship them in for rendering. Write for our terms and shipping tags. Highest cash prices paid for beeswax, or we will change your wax for foundation.

We have in reserve a complete line of bee supplies which we can quote you attractive prices on. We also have some special offers to make on 8-frame hives, bottom boards and covers.

Send in your list of requirements and let us quote you on same.

#### ADDRESS

**The Deroy Taylor Co., Newark (Wayne Co.) N. Y.**



## Beekeepers:

Place your order for supplies now and take advantage of the Early Order Cash Discount, 5 % for December, 4 % for January. Our stock of Standard Hives, Supers, Hive Bodies, Brood Frames, Foundation and all other Standard Goods is complete. "If you want the Cheapest, buy the Best."

Our Aim is to give Prompt Service, Highest Quality and Guaranteed Satisfaction to our customers. Send us a trial order, we feel confident you will be satisfied.

Our Annual Catalogue will be ready for mailing, January, 1921. It's free for the asking.

**August Lotz Company**

Boyd, Wisconsin

## Place Your "falcon" Order Early

**D**ELIVERIES will be more certain; everything will be on hand ready for spring. Special discount to early buyers.

Include an Ideal Bee Veil in this season's supplies. Made of light weight indestructible wire and strong cloth. Will not blow in your eyes or stick to your face.

"Falcon" bees and bee supplies are guaranteed to give absolute satisfaction.

Send for our red catalog.



PRICE \$1.60

**W. T. Falconer Manufacturing Company**

Falconer (near Jamestown), N. Y.

"Where the best beehives come from"

## QUEENS

### Package Bees

## QUEENS

**ORDERS are coming in daily for 1921 shipping**

My FREE circular gives prices, etc. in detail. Safe delivery guaranteed. We ship thousands of pounds of bees all over the U. S. A. and Canada. Our Fall flow is very favorable for Queen-rearing up to about Christmas so I can furnish you queens the balance of this year at the following prices.

	1	6	12	50	100
Untested Queens....	\$1.50	\$ 7.50	\$13.50	\$ 48.00	\$ 95.00
Select Untested.....	1.65	8.25	14.85	52.80	104.50
Tested Queen .....	2.50	13.50	27.00	110.00	
Select Tested .....	3.00	16.30			

## NUECES COUNTY APIARIES

E. B. Ault, Prop.

Calallen

Texas

# MONEY SAVING PRICES

As the dollars increase in value, there is the greater incentive to save them. One way in which readers of the "Domestic" can save money on many items of supplies is to make use of our "ordering department." The goods are shipped direct from factory to you, at a material saving in price. Below we list a few of the leading items that we have been ordering for Beekeeper readers. A more complete price-list will be sent upon application.

## A Pound Flint Glass Screw Cap Jar for Honey

We have had more calls for a flint glass screw cap jar that would hold a pound of honey than all other sizes combined. The jar we have been furnishing is not the extreme tall style, neither is it the regular low jar, but one about half way between, with graceful proportions and beautiful sloping shoulder; a jar that you will be proud of when filled with beautiful honey of your own production.

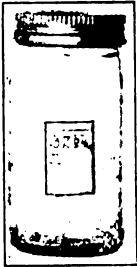
We quote you as follows, f. o. b. our factory in West Virginia

No. H59 pound Flint glass jar, packed 2 dozen in a paper re-shipping case, per gross.....\$8.50

We can also furnish and ship from the same factory, a nine ounce screw cap jar, that is a very desirable shape, at following prices:

No. H54 Flint glass screw cap jar, holding nine ounces of ordinary honey packed 2 dozen jars to the re-shipping case, per gross .....\$6.85

All jars have Lacquered screw caps and waxed paper liners.



H54 Jar

### Screw Cap Jar Holding 20 oz. of Honey

Packed in 2-doz. Paper re-shipping case; F. O. B. factory per gross .....\$9.25

Packed in crates, per crate of 11 dozen.....\$7.45



H59 Jar

## Friction-Top Cans and Pails

We quote you a very good quality Friction Top Pails from Chicago, Ill.

2 lb. Cans, 612 to the crate, per crate...	\$26.00
2½ lb. Cans, 462 to the crate, per crate...	23.00
3 lb. Cans, 420 to the crate, per crate...	24.50
5 lb. Pails, 100 to the crate, per crate...	8.35
5 lb. Pails, 200 to the crate, per crate...	16.35
10 lb. Pails, 50 to the crate, per crate...	6.85
10 lb. Pails, 100 to the crate, per crate...	13.00

Friction Top Cans and Pails in Re-shipping Cases

2 lb. Cans, 24 to the case, per case.....	\$1.45
2½ lb. Cans, 24 to the case, per case.....	1.65
3 lb. Cans, 24 to the case, per case.....	2.00
5 lb. Pails, 12 to the case, per case.....	1.42
10 lb. Pails, 6 to the case, per case.....	1.20

## Sections

We are offering a good grade of comb-honey sections at a considerable reduction from regular catalog price. We sold many thousand of these sections last season, without a single complaint. We quote as follows f. o. b. factory in Wisconsin:

No. 1 stock 2-beeway sections, per 1,000.....\$15.40

No. 2 stock.....50c per M less than No. 1

Plain sections.....\$2.00 per M less than beeway in either grade

Early-order discount on sections: January, 4% ; February, 3% .

Early-order discounts do not apply to tin or glass containers

Address orders and inquiries to

**The Rattray-Hamilton Co., Almont, Michigan**



# The DOMESTIC BEEKEEPER

SUCCESSOR TO  
*The Bee Keepers' Review*



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VOL. XXXIV

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NO. 1

## *Beekeepers Should Attend Conventions*

*George W. York, Spokane, Wash.*

I wish I could tell the many advantages to be found in attending conventions of beekeepers, or any other conventions, for that matter. But if I could tell enough of the advantages so that the readers of *The DOMESTIC BEEKEEPER* would be led to see what they might gain by going to conventions, or other gatherings of beekeepers, I would feel well repaid for writing this article.

I think I have told before now about a certain leading beekeeper in Illinois who attended the National Beekeepers' convention that was held in St. Joseph, Mo. many years ago, when E. T. Abbott lived there. My Illinois friend heard Mr. Abbott tell there for the first time about feeding cakes made of sugar to bees in winter, when they are unexpectedly found short of stores. He afterward said that one bit of information was worth to him all it cost to attend the meeting!

Now, if one of the best and most extensive beekeepers in America gives such a testimony in favor of attending conventions, how much more valuable should they be to the inexperienced beekeeper who attends?

I, perhaps, have attended about as many conventions of beekeepers as has any other person in the United States, outside of possibly Editor E. R. Root and a very few others that I might mention. And I have always found such attendance very helpful, indeed. You see, many most excellent beekeepers attend conventions and will talk, when it would be quite impossible to get them to write their experiences for publication. Very often, in just a few words they utter in convention discussions, or possibly between sessions, some very valuable information in regard to hive

manipulation, or about producing or marketing honey.

Then, again, you might be able to give to others something that is really worth while. By such interchange of ideas and experiences the industry of beekeeping is advanced, and all are benefited.

Besides all the foregoing, the meeting face to face of those whose writings you have read in the bee papers or bee books, is surely delightful. What would you take for the privilege you had in meeting, greeting and hearing the following: Father Langstroth, Dr. C. C. Miller, A. I. Root, G. M. Doolittle, Prof. A. J. Cook, W. Z. Hutchinson, J. S. Harbison, E. R. Root, C. P. Dadant, Eugene Secor, Wm. McEvoy, J. B. Hall, M. H. Mendleson and many others I could name? I know I shall always prize beyond expression the exceptional privileges I have had in meeting so many of those who had so much to do in placing beekeepers and honey production upon the solid basis that it occupies as a profitable business today.

So I want to urge all the beekeepers who can do so, to fail not in attending every convention they can possibly afford to reach. And do this not only to get some benefit, but to be of benefit to others who are there. The good book wisely says, "In a multitude of counsellors there is safety"—and there is likely to be much wisdom, too. So "get together."

Again, I say, attend all the conventions you can. This advice costs you nothing, but you may find it pretty valuable. As "the proof of the pudding" is in the eating thereof, so the proof of the value of attending beekeepers' conventions is in being there yourself. So get the convention habit.

## Modern Methods In Comb-honey Production

*E. S. Miller, Valparaiso, Ind.*

It has been said that there are about as many modes of manipulating bees as there are beekeepers. Many different plans are advocated in the bee-journals. The difficulty with most of them is that they are not generally applicable to the varying conditions or that they require too great an expenditure of labor. Among the numerous methods described for the production of honey and especially for comb-honey, I wish to call attention to those of three of the noted beemen of the last generation, and then endeavor to set forth a plan by which we may adapt the best features to our own requirements.

The method of E. W. Alexander of New York was to place most of the brood above a queen-excluder with the queen below with empty combs or foundation and one frame of brood. In ten days the upper story of brood was removed to a new location and given laying queen. It is apparent that this would not work satisfactorily in a region in which the main flow is from clover as it would divide the workers of the colony at the time when a strong working force is most desirable.

It is only fair to Mr. Alexander to say that he did not recommend this plan for comb-honey but I have known others to try it.

G. M. Doolittle's plan was to place upon the hive at the beginning of fruit bloom, a second hive body. Then, at the beginning of the clover flow, to remove the brood, shaking the bees to the combs of the second hive body which was placed on the bottom-board to form the new brood-nest. The first hive or brood-nest was next placed above an excluder on some weak colony for ten days and then removed to a new location. This hive could be given a laying queen, a cell, or allowed to rear a queen from a cell already started within the colony. Section supers with bait sections were added to the colony on the old stand at the time of shaking. Doolittle's plan was an excellent one, in many respects, as it effectually prevented swarming and threw the whole force of bees to the colony which was to produce comb-honey. One disadvantage is that we are not always in possession of weak colonies upon which to place the surplus brood, and to rear queens and to form nuclei early enough is not always practicable for the average beekeeper.

Dr. Miller's plan was to allow the bees to swarm, to have the new swarm on the old stand, and to place the old hive close beside the new colony. In seven days the old hive

was removed to a distance. It was claimed that the flying bees would return to the old location in sufficient numbers to materially strengthen the new colony, making a strong force for comb-honey production, and at the same time it would deplete the strength of the colony removed, so that the first queen to emerge from the cell would destroy all others and thus prevent swarming. This plan, no doubt, will do very well for one who has time to watch for swarms, but for the commercial producer with numerous outyards, it is not applicable.

What the up-to-date producer of comb-honey wants is a method that will insure a strong force of workers at the right time and at the same time forestall any desire on the part of the bees to swarm. Any "best method" should also look to a restriction of brood-rearing during the honey flow for, as Mr. Geo. W. DeMuth says, the bees that secure the crop are those reared in the six weeks immediately preceding the opening of the honey flow. Bees reared during the flow not only reduce surplus stored at this time but also consume large quantities of honey after the flow is over when they can do no useful work.

In outlining a plan of manipulation, I am going to assume that the bees have been properly wintered, that they have come thru strong in numbers and with plenty of honey. It is assumed, also, that you have carried over from last season a goodly number of brood-combs with sealed honey with which to make doubly sure that every colony has an abundance of food; for, without this supply, if there should come three or four weeks of cold rainy weather, as is often the case, the process of turning honey into bees will be checked, the queen will stop laying, eggs will be destroyed and the colony seriously weakened just at the time when colony strength is all important.

Here is a mode of handling that I have found most satisfactory. At the beginning of fruit bloom add a second hive body, (Fig. 1) above, over a queen-excluder. This second body should contain the equivalent of two combs of sealed honey, placed at the sides. The middle frames should contain empty drawn combs and the remainder of this second hive body should be filled with full sheets of foundation. By this addition, swarms are prevented at fruit blooming time. There are certain advantages in placing it above with an excluder. Doolittle claimed that the honey stored would be carried up to the sections after the bees were shaken. In my own ex-

perience I have found that the bees will sometimes swarm in preference to performing this labor. One advantage is that foundation may be drawn out entirely down to the bottom bars, while if placed below the brood-nest, the tendency would be for the bees to gnaw it away. A disadvantage is that if the center combs would become filled with honey and capped it would be necessary to replace them with empty combs.

The next step is as follows: At the beginning of the clover flow remove the lower story with the brood, making the second story the new brood-chamber. (Fig. 2) Add two comb supers with bait sections near the center of the first. Find the queen and after shaking the bees in front of the new brood-nest, let her run in. It is important that at least one empty drawn comb be available for the queen to begin laying. It is also important to see that there is sufficient honey to provide against any period of inclement weather which sometimes comes even in June. It will readily be seen that if the brood-chamber were filled with empty drawn combs there would be little or no honey stored in the sections until these brood-combs were filled. Furthermore there would be a likelihood of swarms occurring a few weeks later when these combs become filled with honey and brood. For this reason the full sheets of foundation are used, thus tending to force the honey into the sections. If the above scheme is carefully carried out and the bees are properly shaded, there will be very little danger of the bees swarming out or absconding. By this method there will be a cessation of brood-rearing equivalent to three weeks, owing to the fact that all brood has been removed, and consequently, there will be fewer bees to feed after the flow is over.

The next problem is what shall be done with the brood. If you have weak colonies it can be placed above them according to the Doolittle plan and in ten days removed to a new location and given a queencell. If not, then leave a sufficient number of bees to care for the brood and place the hive near the new colony according to Dr. Miller's plan. In ten days remove, kill cells and give a cell from your best stock. You will, of course, have started rearing queencells from larvae from your best breeder on the same day that the bees were shaken. If one has young laying queens or perfers to purchase them they can of course, be used instead of cells, but no beekeeper can afford to requeen from poor stock.

It will be observed that the above mode of manipulation insures a maximum number of bees at a time when more bees means more honey, and it cuts off brood-rearing at the time when an increased amount of brood

would result in a greater number of consumers, both in the larval stage and as adults. It is true that it sometimes happens that with a prolonged flow, colonies may become somewhat weakened before it is over, but, on the whole, it is preferable to rearing a horde of bees at the wrong time only to consume the crop after it is gathered.

In localities where buckwheat, heartsease, goldenrod or other late summer or fall flowers furnish the main crop, the same modes of manipulation may be followed, the work being done preferably at or about the time the plants begin to yield nectar. The surplus brood will be found useful in building up nuclei or weak colonies for next year's campaign.

Some of the advantages of the methods described may be enumerated as follows:

1. It brings about conditions similar to those of natural swarming.
2. It insures continuous brood-rearing in the spring time, resulting in the maximum number of bees at the right time.
3. It restricts brood-rearing at a time when the brood and bees would become consumers rather than producers.
4. It effectually prevents swarming.
5. It guards against starvation in case of inclement weather.
6. The plan is applicable to outyards.
7. Incidentally, it is an effective mode of treatment for European foulbrood. You can cure the disease and at the same time get a crop of honey.
8. It requires the minimum amount of labor.

The methods here outlined are not mere theory. It has been found to work out satisfactorily in practice, and while certain localities may require a modification of details, I believe that the principles are correct and worthy of careful study.

#### Adopt New Grader

Members of the Wisconsin Beekeepers' association, in their convention at Madison recently, adopted the newly invented Blumenfeld honey grader which has the recommendation of the division of markets. The division of markets recently established standards for honey grades in Wisconsin and it was found the only grader on the market was a cumbersome contrivance which cost \$10. M. F. Blumenfeld, state superintendent of public property, with a pocketknife, a strip of cardboard and a little paint made a grader on which he secured a patent for the benefit of the beekeepers of Wisconsin. The Blumenfeld grader will be made of celluloid or aluminum and will retail at not to exceed 75 cents. It is simple, so that anyone can grade honey who is not color-blind, and will tend to reduce the price of honey to the consumer as every beekeeper can afford to own one and grade his own honey.

# The DOMESTIC BEEKEEPER

SUCCESSOR TO  
The Bee Keepers' Review

LANSING MICHIGAN  
ONE DOLLAR AND FIFTY CENTS  
PER YEAR  
PUBLISHED MONTHLY

E. A. LITTLE, Lansing, Michigan  
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ADVERTISING RATES—Advertising rates will be sent on request.

## OUR BIRTHDAY

With this issue The Domestic Beekeeper begins its thirty-fourth year. The beautiful thing about it—to us—is that prospects for a better journal, for an increased army of readers, and the advertising support of the majority of progressive firms, never appeared so bright.

The present management of the journal believes in supporting everything undertaken that promises to benefit the industry. Realizing that we can grow and progress only by retaining the friendship of every reader, we're going to give him such material that this friendship will be retained and spread throughout the country.

We believe the manufacturers of bee supplies, the jobbers, those who have much to say concerning the marketing of the honey crop, are sincere friends of the honey producer; that they are as much interested in seeing adequate prices for honey as the producer is. If we can, during the coming twelve months, bring that fact home to our readers, create a better sentiment in the industry, our initial aim will have been accomplished.

On our thirty-fourth anniversary, then, we are looking forward into the future hopefully, knowing full well there have been things in the past to be regretted, some mistakes made, but resolving to forget them and make proper atonement. Will you help us in this resolve?

## A TARIFF ON HONEY

It is certainly "up" to every organized beekeepers' association, and most especially "up" to the now-functioning American Honey Pro-

ducers League to get busy immediately on the matter of a tariff upon imported honey. It is the announced intention of the coming Republican administration to put into effect just as early as possible a protective tariff on practically all commodities imported into this country, so as to enable the American producer to compete with foreign importations.

As we understand it, the importation of honey has never been regulated by a tariff; it does seem to us that now is the time to prepare for a strong showing before the committee that will handle the matter at Washington. When the proper time arrives, beekeepers should have their representatives present and request a reasonable tariff upon imported honey. Honey certainly needs protection as much as a dozen or more other food commodities about which such a fuss has been made during the last few weeks.

A reasonable tariff on imported honey will enable honey producers of the United States to compete successfully with the imported article from Australia, New Zealand, Mexico and South America, which is being constantly dumped into the domestic market at a very low figure, owing to cheap labor conditions in those countries. A continuation of this condition can have only one result—eventually the American honey producer will be forced almost if not entirely, out of the business.

It's time for action. Will the association get busy?

There have been many replies to our request for suggestions made in last month's journal. And most of them were constructive suggestions which are in many cases going to be acted upon. Here's a funny thing, though: One reader thought we ought not to increase the subscription price to \$1.50. Another from the opposite end of the country said it was the best thing we ever did, and that if every bee-journal did the same thing (which they're doing, by the way), it would be a benefit to the industry. Wonder which is right?

Please remember the new ownership of the Beekeeper does not handle supplies. The Rattray-Hamilton Co., Almont, Mich., which formerly issued The Domestic Beekeeper, will be able to take care of any of our readers desiring supplies, in first class manner, and we also recommend every advertiser we've got. You'll get satisfaction from any one of them. In this connection, did you ever stop to think how few bee-journals not conducted by a manufacturer of supplies have succeeded? Fellow told us the other day it couldn't be done, but we're out to prove that he's mistaken.

If every one of you subscribers would send in just one subscription for a beekeeping friend, we'd have a circulation that would startle the natives. Why not do it? Cost you \$1.50, but worth double. If it would suit better, send in the name of a friend, and we'll write to him about it.

## American Honey Producers' League

### Recent Directors' Meeting in Chicago the Start of Aggressive Campaign

**B. F. Kindig, East Lansing, Mich.**

I have just returned from the Chicago conventions which have been held there recently. There was a conference of the Apiary Inspectors of the North Central states and an executive committee meeting of the American Honey Producers League and the convention of the Chicago Northwestern Beekeepers' Association. You will appreciate that we were very busy when I say that these three meetings were held during Monday and Tuesday of this week. The Chicago Northwestern convention was an interesting convention and the conference of Inspectors was of great interest to the inspectors present. but the thing that I believe you will desire to know about most of all is what happened regarding the League.

President LeStourgeon of Texas had been doing some very good work in connection with the preliminary organization work in the various states and reported that all of the states west of the Mississippi and many of the states east of the Mississippi have signified their desire to join the league and that their money was ready for the league as soon as the secretary would signify that the league was prepared to function. He mentioned that there is in sight now about \$11,000 with which to carry on the league's activities outside of the matter of advertising. The president named the permanent chairmen of the seven Bureaus of the League as follows:

Educational Bureau, B. F. Kindig, E. Lansing, Mich.

Equipment Bureau, Frank Rauchfuss, Denver, Colo.

Legislation Bureau, Colin P. Campbell, Grand Rapids, Mich.

Supervision of Markets, G. B. Baxter, Leavenworth, Kan.

Bureau of Legal Aid, O. L. Hershisier, Kenmore, N. Y.

Bureau of Arbitration to be handled by the Secretary,

Bureau of Research, Dr. E. F. Phillips, Washington, D. C.

The resignation of G. H. Rea of New York as Vice-president and a member of the Board of Directors was accepted and B. F. Kindig East Lansing, Michigan was appointed to fill the vacancy. It was decided to start a nationwide advertising campaign to stimulate the sale of honey and Clifford Muth of Cincinnati was placed in charge of this committee with instructions to get this movement under way

inside of thirty days. It is hoped that thru additional national advertising the market may be stimulated so as to move the honey which is still in the hands of the producer.

The resignation of Charles B. Justice who was appointed temporary secretary a year ago, was accepted and F. B. Parks of Texas was elected temporary secretary to fill the vacancy until the annual meeting in February. Among those who attended the executive committee meeting of the League were the following: O. L. Hershisier, Kenmore, New York; E. C. Cotton, Columbus, Ohio; L. W. Boyden, Medina, Ohio; Clifford Muth, Cincinnati, Ohio; Frank N. Wallace, Indianapolis, Indiana; Chas. O. Yost, Indianapolis, Indiana; F. J. Rettig Wabash, Indiana; E. S. Miller, Valparaiso, Indiana; Colin P. Campbell, Grand Rapids, Michigan; H. L. McMurry, Madison, Wisconsin; S. B. Fracker, Madison, Wisconsin; Prof. Wilson, Madison, Wisconsin; A. L. Kildow, Putnam, Illinois; L. C. Dadant, Hamilton, Illinois; Prof. F. B. Paddock, Ames, Iowa; Mr. Henaker, Salt Lake City, Utah; Prof. F. Eric Millen, Guelph, Ont., Canada; C. D. Baker, Minneapolis, Minn.; B. J. Kleinhesselink, Hardin, Montana; Mr. Staneford, of California Producers' Exchange, Los Angeles, Calif.; Dr. Leonard, Minneapolis, Minn.; Mr. Edwin Ewell, Ypsilanti, Michigan; Mr. R. H. Kelty, E. Lansing, Michigan; Mr. E. G. LeStourgeon, San Antonio, Texas.

The optimistic attitude of all who attended the convention argues well for the future success of the work which has been understanding.

The regular annual meeting of the members of the League will be held in Indianapolis, Indiana, February 15, 16 and 17, 1921.

In connection with the national advertising campaign mentioned by Mr. Kindig, C. F. Muth of Cincinnati, who is in charge of the campaign, writes us as follows:

"This initial fund of \$5,000 or \$10,000 will be made up of the associations who have already joined the League and the affiliated trades. The Procter & Collier Co. of Cincinnati will have charge of the advertising itself. They tell us that they will be able to place three good monthly advertisements of good size in two of the leading women's magazines. This, you will understand, is simply the beginning of what we expect to be the national

advertising campaign. Many of the honey packers and people directly interested in the welfare of the beekeeper have pledged themselves ready to help finance such a campaign."

Mr. Muth added that it would probably be impossible to do much more than make a good start before the convention of the League to be held in Indianapolis Feb. 15, 16 and 17.

### THE TEMPERATURE OF THE HIVE

On page six Oct.-Nov. Number our Canadian friend, Hy W. Sanders, makes a few remarks on the temperature of the inside of the hive.

I would like to tell our friend, how he can learn a whole lot about the inside temperature of the hive and its effect on the bees.

I use a glass top on most every hive. The frame is  $\frac{3}{4}$  thick with the glass on one side fastened with a T tin. In summer time the glass is on the lower side leaving  $\frac{5}{16}$  bee-space between the glass and frames.

In winter the glass top is reversed, leaving one inch space between the frames and the glass so the bees can cross over to any frame.

Over the glass I use a cushion made of feathers or cat-tail seeds which are soft, something like dandy lion seeds. The bag is 22x28, four pounds of feathers or seed making a pillow four inches deep.

I generally use two pillows and a telescope cover twelve inches deep.

I use one thermometer with the bulb directly over the center of the glass and one with the bulb over the corner of the glass.

When the temperature of the inside of the hive gets down to 57° the bees form a cluster about the shape of one-half of an egg similar to a cluster cut in two.

The ring outside of the cluster touches the glass all around so when you take the cushions off you can see the edge of the ring of the cluster and the outside bees are continually squeezing through the ring to get inside where it is warm.

The temperature of the inside of the cluster is only one or two degrees warmer than the thermometer over the glass. The temperature outside of the cluster (in the hive) may go from 57° to 55°, 50° or down still lower, depending on the thickness of hive and amount of packing.

The temperature inside of the cluster will rise as the outside air gets cooler and will go up to 60°, 65° or 70° in a well packed hive.

In a hive not well packed it may go up to 80° or 90° and the queen may begin to lay then they raise the temperature to 97° or 98°.

The two cushions 8 inches deep are such wonderfully good non-conductors that the thermometer over the cluster will be 97° and I think the brood never gets warmer than 98°

only 1° difference between the brood and the thermometer on top of the glass.

The size of the cluster depends mostly on the number of pounds of bees in the cluster. It also depends somewhat on the low temperature outside of the cluster as the bees get closer together the cooler it gets. Now the great advantages of the glass cover and thermometers are:

1st.—You can see the bees without removing the cover or breaking the seal made with propolis by the bees.

2nd.—You can tell if the bees are alive also about how many pounds there are (the size of the swarm).

3rd.—In the spring after the bees begin to breed if the thermometer is only 70° or 80° there is no brood and very sure there is no queen. If the thermometer is 96° or 97° there must be brood and of course a queen.

4th.—If you see young bees you will know that the brood is emerging and the queen has been laying about a month.

5th.—You can tell if the size of the swarm is increasing.

6th.—You can tell if the size of the swarm is decreasing which indicates spring dwindling (if the queen is laying).

7th.—If you see white wax on top of the frames you know that the honey flow is on and you need a super.

I only use thermometers on three or four hives but if I put my right hand on the glass over the cluster and my left hand in the corner I can tell very nearly what the temperature is, especially if I learn on the hives that have the thermometers. Some glass covers that I neglected to reverse in the spring the bees raised drones in the inch space between the glass and frames.

The drones that were next to the glass could be seen through the glass as the glass formed one side of the cell. That showed how warm the cushions kept the top of the hive.

If a cluster of bees is 8 inches in diameter and it is in a hive 16 inches square and 16 deep there is four times as much surface for the heat to get out of the hive as there is surface, for the heat to get out of the cluster and the hive is 8 times as large as the cluster and it would be much better for the bees if the hive was much smaller.

If the 8 inch cluster weighed two pounds a 16-inch cluster would weigh 16 pounds and each bee would need to eat less honey to keep warm than each bee in the 8-inch swarm in an 8-inch box.

If our Canadian friend or any of your subscribers use a glass cover and two thermometers I would be very glad to hear from them.

C. E. FOWLER,

15 N. Second St., Hammonton, N. J.



## Honey and the Tariff

*George W. Williams, Redkey, Ind.*

Congress is just now building a tariff law for the protection of agricultural interests in the United States.

The committee decided to put a tariff on about twenty agricultural products so as to stop the drop in prices. Honey was not included in the list. It should have been.

Just why those who are entrusted with looking after the beekeepers' interests did not present our claims is not clear. Likely, no producer could afford to do so as an individual and the importers and bottlers wished to stop the slump, and our apicultural department in the states and at Washington could spare the time to do so, although I understand that a committee of leading men in various lines connected with the business succeeded in persuading the authorities to increase the appropriation for extension work quite a good deal.

But it seems to me that the price of honey to the producer is fully as important as the other, important as the extension work is.

But who is to do it? And how? And again, what can be done, if anything?

Most of the honey produced is bought by the big bottling concerns, and obviously a higher price to the producer does not appeal to them, in a strict business way.

But they have influence. They aided in boosting the extension appropriations, and will aid in getting a tariff on foreign honey—if we ask it of them in the proper spirit.

Our congressmen and senators have an ear to their constituency's interests.

The most we little folks can do is to sit right down and write about three letters, or more if the spirit moves, one to our congressman as the house is now at work on the bill: then write one to the biggest bottling concern you know of, say for instance the A. I. R. Line Co. and one to the Apicultural department at Washington. Dr. Phillips will give a good account of himself if he knows you want him to.

I am sure that if every beekeeper in the country would do this we would get protection, and if somebody does not act, we will get none. See the point? DO IT NOW.

## Notes From Iowa

*J. W. Stine, Burlington, Iowa*

To know Dr. C. C. Miller was to love him, and this Scripture is true of him, "He being dead, yet speaketh." A great many beautiful tributes have been paid Dr. Miller's memory, but this is the one we will all come to realize and appreciate more and more as time goes on.

We are wintering our bees on the summer stands, moving them a short distance and placing them in pairs, then packing with leaves or straw. So our colonies are "snug as a bug in a rug." The most of the bees in this locality went into winter quarters with plenty of good honey for their winter stores. However I do not believe our bees will come out as strong in bees or with as much honey for the early building up of the colony in the spring as the bees that are wintered in the cellar.

At the annual meeting of the Iowa Beekeepers' State Association held in Council Bluffs, Ia. from Nov. 17 to Nov. 19 the following officers were elected: President, A. F. Bonney, Buck Grove, Iowa; Vice-president, J. H. Paarman, Davenport, Iowa; Secretary and Treasurer, F. B. Paddock, Ames, Iowa;

Directors, J. H. Allison, Council Bluff, Iowa; R. C. Warring, Marshalltown, Iowa; F. W. Hall, Colo, Iowa.

A short course for beekeepers will be given at Ames, Iowa during the Farm and Home week January 3 to 8, 1921. The similar courses which have been given at Ames were of great practical value to those who attended and the program this year is as strong if not stronger than of previous years. There is no cost to enroll in this short course, and full particulars can be obtained by addressing the State Apiarist, F. B. Paddock, Ames, Iowa.

A meeting of special interest to the beekeepers of Des Moines county is being planned to be held some time the latter part of January or in February. Announcement and program of this meeting may be found in the January number of *The Domestic Beekeeper*. This will also be a special number for Iowa.

Sending out hundreds of bills the last several weeks. Almost 100 per cent are renewing, and the new subscriptions keep the editor gleeful.

## Seasonable Notes

*H. W. Sanders, Sturgeon Creek, Man.*

In a previous issue I told the readers of the "Domestic" something about my winter's task in overhauling my stock of drawn combs. I have been, during the past week, engaged in this work and as I scraped the propolis off the frames and sorted the combs according to quality, I was again impressed with the vast importance to the beekeeper of the combs he uses. There is at least twenty-five to thirty per cent difference in the number of available worker-cells in a good comb than in a poor one, even if those that are all or largely drone-comb are weeded out at once. Holes in the comb, spaces above the bottom-bar, patches of drone-comb, and mutilations of different kinds in extraction are the causes. Now if one considers a ten frame Langstroth hive, a difference of twenty per cent in efficiency of combs will reduce its capacity to an eight frame, and the eight frame to less than six and one-half. So that if a hive does poorly, and swarms early through being overcrowded, the cause may actually be found in the condition of the combs that do not give the queen adequate breeding room.

\* \* \* \*

There is another matter connected with combs that has been brought to my attention, and that is the effect on the color of the honey. I exhibited in a local exhibition and though I took second price, I was beaten by a near neighbor who got first. Both of our bees obtained honey from the same territory, and at the same time, for the rest of the season was a failure through drought, yet the honey he had on exhibition was quite a shade lighter in color than mine, and was rightfully awarded the prize. In conversation over it he told me that he had extracted that honey from combs that had been built this season, that is, new combs. I had taken mine from the ordinary extracting combs, some of which are old and stained. As a result of his experience I shall make a point of putting supers of foundation on some of my strongest hives to get some extra good honey for exhibition, and in the winter overhauling, I am separating the oldest and blackest combs. They go either into the wax pot, or if exceptionally good and with only their color against them, they go into a lot of supers marked "No. 2" and will be used for increase, or for use in an emergency. Combs with an excess of drone, or irregularly built are quite good for honey storage and therefore they go into supers marked "H," for honey only.

Convention time is around again, and all beekeepers are urged to join their local Association. It is amazing what can be picked up as to methods at convention time, and we shall make progress only as we are willing to help one another. One item ought to be on the agenda at all conventions and that is "How to make a start with bees." About half of the inquiries that are received and answered deal with this one topic, and there are annually a great many beginners who start out with bees and who then make some common mistake, just for want of advice and lose their bees and their interest together. We often get inquiries as to whether it is possible to winter bees in the attic, or how they should be fed in winter, or whether a start can be made with nothing but a queenbee, or something of that kind.

\* \* \* \*

Speaking about beginners naturally brings us to remark that it is the spring that is the real testing time for the novice. Not till he has completed the full cycle of the twelve months can he graduate as a beekeeper, and too often after a highly interesting summer during which time he divides and unites and extracts and generally mismanages his bees, the next spring sees him with an empty hive or two and a year wasted except for experience. If he has the right stuff in him he will begin again and in the light of his new-found knowledge will go ahead and make good. It is not enough merely to be able to say that one has brought a colony or colonies through the winter alive. Unless they are strong enough to get the early honey they are often no good till next season, so the real test is to get colonies that will swarm, or be strong enough for it, by the first of June, then the rest is easy.

\* \* \* \*

It is a good piece of advice to the man with a number of colonies to send away right now, some money to a southern queen breeder, with instructions to ship a queen, or several, as may be required, by the middle of May at latest. This is because there is always a danger of having a colony lose its queen before the weather is warm enough to permit them to raise a successor. Unless one has a weak colony with a good queen, such a colony is practically a loss, for to join it to another seems not to do any particular good, and to send away then for a queen is generally too late. The queen breeders are mostly booked ahead from the first of the season, and by the

time one's turn comes around it is too late for the queenless colony. So the moral is to order now.

\* \* \* \*

I wonder how many extracted honey men clip their queens? In the text-books it is nearly always recommended more or less, and that method of letting the colony swarm, finding the queen in the grass, removing the parent colony and substituting an empty hive for the swarm as it returns, is described. I wonder how many beginners, or others than experts ever did that business? These questions are prompted by my experience of the utter ease with which I have hived the few swarms that I have had, by just shaking the clustered mass onto a cloth before a hive, and the trouble I had, as a novice, the only time I tried the plan described. In the first place, where there are a number of hives it is often the case that one cannot tell from which hive the swarm has emerged. The professional beekeeper has far too much to do to watch for swarms, and the amateur is often away. If a swarm is found in the air or on a post and one is not sure of the hive, the clipped-queen method is manifestly a failure. Even if the hive is located in time, the excited beginner is going to have quite a time getting that queen in the grass, and caging her. Then he has to move the hive away, possibly with a couple of supers on it and substitute an empty one before the swarm returns and that may be within ten minutes! If it starts to return while he is in the middle of the job I wonder what would happen? Possibly they would enter the hive next door.

However the clipping of queens is with me a thing of the past. By raising brood into an upper story I can pretty well control swarming, and my increase is all made artificially. When a swarm does by chance emerge I just hive it in the old fashioned way.

#### California Sells Honey to Consumers in N. Y.

About two weeks ago there came into New York for sale here one-third of a million pounds of California honey. C. G. Standeford, who represents the California Honey Producers' Co-operative exchange, says he had been warned that it was entirely impossible to dispose of such a shipment of honey.

It was put up in five-pound tins, and the consumer had been educated to buying honey in packages of a few ounces. A week after its arrival these thousands of pounds of honey had been purchased and orders placed for several pounds more.

Said Mr. Standeford: "Our next shipment will probably be close to 2,000,000 pounds. It is on the way here now.

"California honey," went on Mr. Standeford, "is noted for its quality and its flavor, particularly in the better grades, which bring the

highest honey prices in the world. Sage, orange blossoms, and alfalfa are especial favorites.

"Up until two years ago honey was marketed through dealers and speculators who bought it from the beekeepers here and there, with all the usual uncertainty on the part of the beekeepers as to whether a season's crop could be sold.

"Two years ago the beekeepers, who were tired of this method of doing business, banded together and formed the organization which I represent to market their own honey. They packed it in one-pound glass jars and two, five and ten-pound tins, and began to educate the people to the use of honey. We feel we have gone far toward that happy estate of the product direct from the producer to the consumer."



H. W. McFadden, of Howland, Texas, just ready to hive a big swarm of bees. Notice how afraid he looks!

## Bees Save Iowa Pastor To Flock

### "Every Preacher Should Keep Bees," Says Rev. Stine of Burlington, Iowa

We really intended writing this article ourselves, but a special writer of the Burlington, (Iowa) Hawkeye did the job so well it is hard to improve upon. Many of our readers know Rev. Stine personally, and most of the others by reputation. In fact we've about persuaded him to contribute some of his worth-while "Field Notes" to this journal as a regular feature.

But read the article, the most interesting parts of which are reproduced below:

Bees pay part in a Burlington preacher's salary and enable four churches on the Burlington circuit to secure an able pastor. If it was not for these busy buzzing little bees working in the flower gardens of Burlington, and the fields nearby, Rev. J. W. Stine, pastor of Aubury, Shilo, Augusta and Spring Grove churches would leave for a more lucrative field and in these days when the H. C. L. is such a problem churches on the Burlington M. E. circuit might have difficulty in continuing services.

Fortunately bees are untroubled by rising prices, have no labor troubles, never strike for more pay, work Sundays, yet they are highly organized to produce to the utmost—without stint or limit. By putting in a full day they fill fifty hives with luscious honey three times a season. The major part of this rich store is taken by the preacher and distributed among his customers. The profits give him sufficient income so that he is able to piece out his salary and make a living.

"Every preacher could be a beekeeper if he wanted to," Mr. Stine said. "Where he is ministering to small congregations it is the best solution of the problem of making a living. I have kept bees for fourteen years. If it wasn't for my bees I couldn't carry on my work here. I sell a good deal of honey and am building up a nice business selling and shipping queenbees to other apiarists."

An hour idled away with Pastor Stine at his cosy home at Mt. Pleasant street and Dankward road—an hour among the bees and flowers where the droning music of the myriad workers, like the sound of a far off aeroplane, lulls and soothes and drives care away and brings forgetfulness of the striving in the city beyond the white picketed enclosure that protects the apiary and the garden. There it is easy to believe that the life of the bee—for bees are members of one of the oldest families in history—has held the attention of philosophers of all ages and stimulated the imagination of poets of all races. Since men

began printing on soft mud with sticks, bees who live in society under complicated laws and work prodigiously in darkness have claimed notice and praise. Aristotle and Catoptra found wisdom in bees, a great riddle of the Bible is built on work of bees. Horace on the Sabine farm and Virgil would have been lonely without them, Napoleon strewed them in the white banner that blazed through the capitals of Europe and only recently Maeterlinck stopped the wonderous flight of fancy of "The Blue Bird" to write the "Life of the Bee," and in telling of the nuptial flight of the virgin queen produce the choicest bits of poetical prose that literature reveals.

### Bees Brought on Iowa's Honey War

Bees played a part in the early history of this section of Iowa, Clark county, Missouri, and other adjacent border counties. The honey that wild bees stored in trees in that section led to "The Honey War" and the militia of both commonwealths were called out prepared for battle and civil war was barely averted.

There are enough bee-yards, as groups of colonies are called, now in Iowa to make war worth while. Mr. Stine knows of 500 bee-yards and corresponds with many of the beekeepers. Iowa ranks the third state in the Union for honey production and first for the number of beekeepers. Bee-culture is given unusual attention at Ames, and F. C. Paddock, a professor there, is one of the noted bee men of the world.

Mr. Stine was first vice-president of the Beekeepers' association of Iowa in 1904-5 and is now president of the Des Moines County Beekeepers' association which will hold a meeting with forty or more members present during the Tri-State Fair.

### Preacher Likes Bees

Pastor Stine has mixed preaching and bee-keeping for a good many years. His home yard is in Burlington but he gathers honey from two "outyards," one at Augusta and the other northwest of Burlington. An "outyard" is usually a collection of beehives placed in the woods near a good source of honey. The Mississippi bluffs are favorite spots for "outyards." The upland clover fields and flower gardens furnish food for bees during the early part of the summer when rains are more frequent while later when hot days come the wetter bottom lands bear an inexhaustible supply of thistles, Spanish Nettles and Smart



weed, all good pasture for bees. It may astonish some folks to learn that plants commonly known as weeds like those mentioned, bear blossoms that reek with nectar. This is old news to bees for centuries ago they learned where the sweetest honey lies and have been busy gathering it in for their winter stores.

Before modern man turned his attention to robbing the bees scientifically, workers used a good deal of their energy building up honeycomb from secretions in their bodies to hold the honey. Now artificial honeycomb made in factories is supplied the hives and the bees can give undivided time to filling them up.

#### A Paying Business

One hive of bees will produce from six to twelve dollars worth of honey in a season and, if the flowers are abundant, will store enough honey over this amount to tide the colony through the winter. If the honey stored for winter runs short beekeepers feed a sugary mixture to their starving workers. Many colonies average eight dollars worth of marketable honey a season and when this is multiplied by two or three hundred colonies it runs into money.

Keeping the hives clean, watching out for insect enemies—for there are smaller vermin



Two Views of Rev. J. W. Stine and His Money-making Bees

that preys on bees—and avoiding the appearance of disease form the chief concern of the beekeeper. A bee-yard with fifty colonies, the number that Mr. Stine has at home is a pleasant occupation and easier than preaching, he says. This size yard ought to return \$400 or \$500 a year from honey and something extra from the sale of extra colonies of workers and young queens. A colony of 5,000 bees, just an average workable colony, sells for eighteen dollars. An untested queenbee, or a queen from an unrecorded hive brings two dollars, while a tested queen taken from a hive that has proven to contain vigorous stock will sell from three to six dollars and some go as high as eighteen dollars.

#### Bees Nice Profitable Pets

"Every city man should keep a colony or two of bees," Mr. Stine declared. "One colony or hive will give all the honey that an average family needs while two or three colonies furnish a surplus for sale. There is no trouble keeping bees and no danger. Bees make nice pets and it's recreation and good fun caring for them and watching them work.

"A hive can be placed most anywhere. Out under the shade of the trees, up against a shaded outhouse, in a back porch or on the roof, if necessary. Its all the same to bees. They work anywhere and go out to find their honey. They are the one domestic possession that fences never bar, distances perplex or trespass signs frighten away. Mine work Sundays too, even if they do belong to a preacher."

#### METAL FOUNDATION

I remember reading in a recent issue of the American Bee Journal a statement by Mr. C. P. Dadant regarding the above, in which he said that many years ago someone submitted to them a piece made of tinfoil, that it was introduced, and disappeared, and Mr. Dadant expressed the opinion that such an article was not needed.

Had this come from any other manufacturer of wax foundation I'd be apt to doubt his sincerity of purpose, and while I believe him entirely honest in his view I cannot agree with him. The aluminum comb is being accepted, notwithstanding the several objections to it, principle of which is the liability to injury, bending of the edges of the cells. And as far as I have gone in my experiments it appears that there are arguments in favor of a foundation made of metal, the first of which would be immunity from injury; rapidity of cleaning in case the wax was injured or destroyed by worms, mice, or foulbrood; its durability; the saving in cost, in time and small first cost, for, made of copper or aluminum, a piece of foundation to fill a Langstroth frame

would weigh but a trifle.

My experiments to date have consisted in coating a piece of medium brood foundation with plumbago and putting it into a copper bath, after which I melted out the wax and fastened the two halves together and dipped it in melted wax. The bees accepted it readily, but it is now lost, somewhere in the store room. This winter I expect to make larger pieces and give it a more extensive trial.

As the idea was given Mr. Dadant years ago it is not patentable, and anyone wishing to experiment, has my permission. Anyone living in a large city can get the plating done, presumably in a newspaper office that has its own electrotyping plant, but it may be done at home, and is a very simple matter, calling for nothing but a little blue vitriol, an earthen crock and a dry cell battery.

The theories of today will constitute the science of tomorrow, and until I have tried out a full frame of this foundation, supported on wires of proper size and number, I shall think the idea worth something.

A. F. BONNEY,  
Buck Grove, Iowa

#### Successful Western Producer

Fifteen million workers, who toil without pay, never murmur about strikes, are now turning over their earnings each year to R. E. Powers, known as the "bee king" of the Northwest. Mr. Powers is counting up his profits for the year, having already "put his bees to bed" for the winter and is planning for the establishment of a queen bee farm for next year.

Powers now has 300 colonies of bees with 50,000 as an average, in each colony. Production for the year will average 100 pounds to the colony, or a total of 30,000 pounds. With honey retailing at 30 cents a pound, the results of Powers' 15,000,000 wageless workers can easily be figured.

"Everyone in Seattle who owns a back yard is losing money by not keeping bees," said the pioneer bee-man. "To be exact, everyone who fails to take advantage of the tireless workers, who toil without pay, is losing at the rate of \$30 a year a colony. There isn't a back yard that is not big enough for at least two hives. Figure up the number of back yards in the city and one may know how many millions of dollars are being wasted each year."

"Imagine workers who toil all year and then in the winter demand but one meal every nine days," said the beeman. "Every nine days the bees will move about and eat a meal. They will consume but little honey during the winter months, bees believing that meals are necessary only when working."

The country surrounding Seattle, according to the bee expert, is ideal for the raising of bees. Fire weed, which springs up wherever land has been logged off, is ideal honey producing blossoms. It is claimed that fire weed honey is the best and that the demand for it cannot be supplied.

## *Little Notes of the Industry*

We're short copies of the Oct.-Nov. issue. Any subscriber who is not keeping a file will earn our sincere thanks if he'll mail one of these to us at Lansing.

Plans have been completed for an advertising campaign to sell Florida honey. At a recent meeting held in Gainesville, 100 of the most prominent beekeepers of the state reported a total of 15,358 colonies.

J. M. Hartford of Mackville, Wis., removed a stave from the side of his silo a week or so ago and found bees had built one honeycomb after another between the walls. He removed eighty pounds, and left a considerable amount of honey for the bees to feed upon during the cold weather.

Ontario beekeepers held their fortieth annual convention at the Apiculture building, Ontario Agricultural college, Guelph, Dec. 1, 2 and 3. There were many interesting and valuable discussions and several excellent talks. The attendance was large.

E. F. Phillips recently favored us with a copy of Farmers' Bulletin 1151, dealing with alsiko clover. Beekeepers will receive much information from this bulletin, which may be secured by writing the Department of Agriculture, Washington, D. C.

Beekeepers of Indiana held their annual convention at Indianapolis Dec. 16 and 17. George S. Demuth, E. S. Miller, Ross B. Scott and E. W. Atkins were the principal speakers.

The Wisconsin Beekeepers' association, at its annual meeting in Madison early in December, voted unanimously to join the American Honey Producers' League, decided to ask the state legislature to appropriate \$10,000 annually for the inspection of bees and \$3,000 annually for the promotion of the bee industry and elected the following officers: President, H. C. Jorgenson, Green Bay; Vice-President, A. C. Bartz, Jim Falls; Secretary, Prof. H. F. Wilson, of the University of Wisconsin; Treasurer, C. W. Aeppler, Oconomowoc.

Beekeepers of Minnesota, at their annual convention in Minneapolis, re-elected their former officers, including A. W. Rankin, of Minneapolis, president, and O. L. Wills of St. Paul, secretary.

About 100 delegates attended the annual meeting of the New York State Association of Beekeepers' Societies. Officers were elected as follows: President, J. Gordon Dey, Rochester; Vice-president, T. R. Hardy, Watertown; Secretary and Treasurer, John H. Cunningham, Syracuse, the latter being re-elected.

Beehives have become so plentiful in the town of National Park, N. J. that the borough council has been asked to place a tax of \$2 per hive on them. This tax is opposed by the keepers affected, who claim them not to be a nuisance nor are other residents bothered, and as most of the councilmen themselves keep bees, the tax has small chance of receiving favorable action.

Gleanings in Bee Culture goes on the \$1.50 per year basis Feb. 1. This makes four bee-journals to increase their rates, The Domestic Beekeeper going from \$1 to \$1.50 Jan. 1, Beekeepers' Item from 50 cents to \$1 Jan. 1, and the American Bee-Journal recently jumping 50 cents per year over its old rate of \$1. Paper and printing costs, which have been skyrocketing for many months, is the reason for the advances.

Four prominent Iowa beekeepers, C. E. Wright of Ottumwa, George A. Nelson of Osage, E. M. Brown of Iowa City and J. C. Davis of Corydon, will represent the industry at the coming session of the state legislature. Legislation favorable to the industry will be sought.

The 23rd annual convention of the Chicago-Northwestern Beekeepers' Association held in Chicago Dec. 6 and 7, was well attended and an interesting program carried out. By unanimous vote it was decided to join the American Honey Producers' League. E. S. Miller of Valparaiso, Ind. was re-elected president and was chosen as delegate to the league. C. C. Smith of Chicago was re-elected vice-president and John C. Bull of Valparaiso, Ind. as secretary.

Yep, we're rather proud over the bunch of new advertisers who are lining up with us. Look them over in this issue, and when you're writing them, just mention this journal. The advertisers will credit us with having discerning readers, and when we ask them to double their space they'll do it. More revenue means a better journal.

Beekeepers of New Jersey and surrounding states within easy traveling distance of Trenton are looking forward with interest to the annual meeting of the New Jersey Beekeepers' Association Jan. 13 and 14. C. P. Dadant will be there to discuss "The Dadant System of Beekeeping," other prominent speakers being George H. Rea and Mr. Myers of New York state.

Note the new clubbing rates, and books which we are in position to secure for our readers. Read everything you can get on beekeeping. It pays.



### HARMONY PREVAILS IN LEAGUE

The meeting of the Executive Committee of the American Honey Producers' League, together with an informal meeting of the friends of the League, at Chicago, Dec. 6-7, was an important step in the interests of American honey producers. This gathering was attended by representatives of the leading beekeeping organizations and allied industries from nearly every section of the United States. The chief work accomplished was in ironing out many difficulties already encountered, in arranging for proper financing and in planning the future work of the organization. B. F. Kindig, East Lansing, Michigan, was elected vice-president and member of the executive committee in place of Geo. H. Rhea of New York who has been unable to serve. H. B. Parks of San Antonio, Texas, was named as temporary secretary-treasurer to succeed Chas. B. Justice of California, resigned. Heads of the various bureaus viz.: Education, Equipment, Legislation, Marketing, Legal Aid, Arbitration and Research were appointed with power to name their assistants. A number of resolutions were passed recommending certain changes in the constitution and suggesting other action to be taken at the annual meeting of delegates to be held at Indianapolis in February. The utmost harmony prevailed throughout the conference and, with the financial backing now promised, the success of this nationwide undertaking is assured.—E. S. Miller, Valparaiso, Ind.

### Bee Men Urged to Build Local Trade

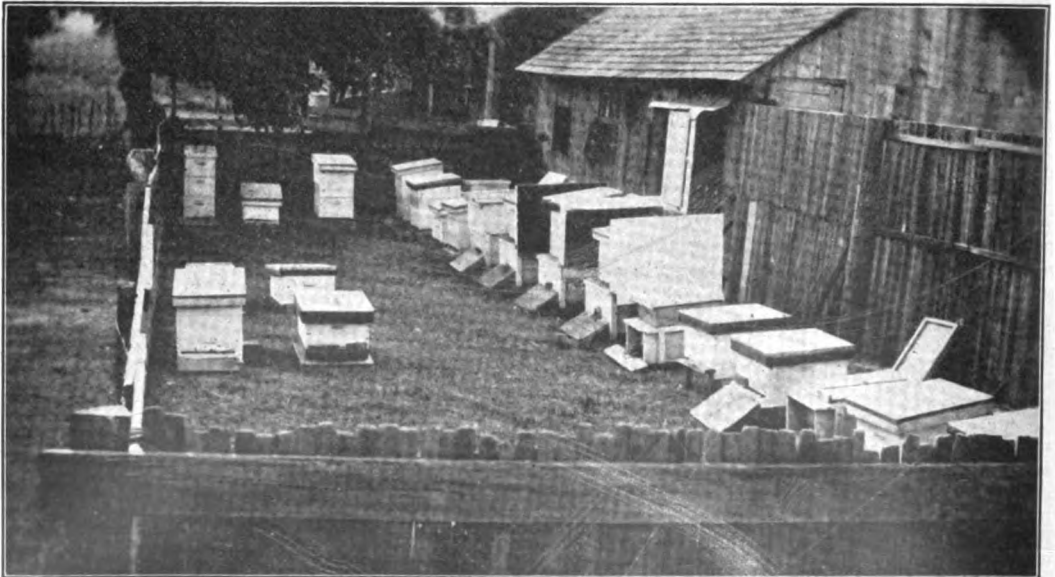
Cultivation and development of private, local trade is the course open to Michigan bee men in meeting the competition of organized out-of-the-state producers, and in overcoming the effects of a slump in the demand for honey declares B. F. Kindig, state inspector of apiaries, and bee expert at the Michigan Agricultural college.

"The California Honey Producers' Co-operative Exchange is now putting up honey in small containers and shipping it into the east in car-load lots," says Mr. Kindig. "The Exchange is also developing a campaign of national advertising, and California honey will be placed on the Michigan market in quantity. Michigan producers must meet this competition by advertising their product and by selling directly to the homes of consumers.

"Our beekeepers do not develop their local markets as they should. There is more money in marketing directly at retail prices than in handling a jobbing trade at wholesale, and the market is more certain."

The slump in price and demand for honey will not continue long, in the opinion of Mr. Kindig, who already sees hopeful signs in the market. He attributes the slump in Michigan to lack of organization of beekeepers for marketing, to the drop in sugar prices, to the unusually high prices paid in recent years for honey, and to the fact that there is a large crop of extracted honey in the hands of the producers.

Wisconsin beekeepers have organized a co-operative marketing corporation, with a capital of \$25,000.



This is a picture of the backyard apiary of Ed Mitchell, Castalia, Ohio. Mr. Mitchell says the nine colonies made 1,400 pounds of honey and increased to 23 colonies. Note the shortness of the grass; this is kept down by a pair of Belgian hares—new rivals of the lawn mower.



### Experiences From Nebraska

I have taken the bee business rather seriously the last two years. In 1919 I had thirty swarms, and on account of it being a very dry season the honey flow was not good. The bees did not hatch a young brood to strengthen them, the weather was rainy and cold in the early fall, it turned very cold and an early winter set in. Sugar was not to be had at any price, and so the bees, I am quite sure, went to wintering, mostly old, and all died but ten, these dwindling to eight hives, and what remained were weak, and did not do much this year.

The alfalfa is of but little value for a honey crop here. A person feels like kicking when he has to depend upon alfalfa. Some will say if you have good bees alfalfa will make fine honey. Yes, but how are the bees going to get the honey if the alfalfa is cut just when bloom is starting to come out? Why, the bees hardly know it is there and it's gone, unless a field is saved for seed.

We've got a set of farmers that need to learn more about alfalfa. We always cut ours when in full bloom, and it makes better hay, and the bees can work on it and get a good honey crop.

I am going to start out new again for next season. Maybe I can do something. Sugar has come down, and we can buy any amount desired. Don't know what will happen if somebody corners it again. I am so tired of high prices and profiteering. All goods are quite worthless—and not much in quality.—Fred H. Seitz, Sutton, Neb.

### REPORT FROM LIVERPOOL

During the early part of November 630 barrels of honey sold at easier prices. We give you, however, the following values, which, in the absence of business, are entirely nominal.

Pile X 90/- per cwt.

Pile 1 75/- to 80/- per cwt.

Pile 2 75/- per cwt.

Pile 3 66/- per cwt.

and the stocks of Chilian are heavy. There is only a retail demand for other honeys. The value of extracted honey at today's rate of exchange is 12 to 13 cents per lb.

**Beeswax**—The only business done during the past month in Chilian is 5 bags @ £10.10.0 and 5 tons F. A. Q. December/January @ £8.10.0 which we consider a full price. The value in American currency is therefore about 27 to 29 cents per lb.—Taylor & Co.

Beekeepers of Florida have asked the governor to set aside a week in January to be known as "Florida Honey Week," in an effort to popularize honey and foster beekeeping. They want it made an annual event.

### Beekeeping in Arizona

I have nineteen apiaries of my own, scattered 37 miles west and 22 miles east of my home apiary. Besides looking after my bees, I have visited many beekeepers in the Gila and Salt River valley the last six weeks. I find all had a fair to heavy crop, most of which they still have, either at home or stored in beekeepers' association warehouses. Our secretary informs me he has had no calls for honey in carlots for the last two months.

Mesquite and alfalfa both yielded well, also the flowers in the valleys and in the mountain ranges. The cotton also yielded heavy in many locations even late in the fall. Many yards are now full with the cotton honey granulated solid in the combs. In my fifty years of beekeeping I never saw bees so heavy or in as good condition for winter as this year.—B. H. Hadsell.

Domestic Beekeeper now \$1.50 a year—and worth it.

### Our New Reputation—

## "The Livest Bee Journal Published"

We're living up to it. Read this issue through, then tell us how it strikes you.

Renew your subscription today, and send along the name of your beekeeping friend.

New rate, \$1.50 a year

**The Domestic Beekeeper**  
Lansing, Michigan

## HONEY MARKET IN

### THE LARGER CENTERS

The following brief reports of market conditions in the larger centers are from the bulletin of the United States department of agriculture, issued Dec. 16. Their accuracy is not guaranteed, but they are believed to be substantially correct in each case.

**MINNEAPOLIS**—Supplies moderate. Market weaker on extracted but comb is holding steady to retailers. Understand comb can be bought from brokers at slightly less than present stock cost but dealers are holding off as long as possible. Movement is very slow, most sales being made to retail grocers.

**NEW YORK**—Supplies very light. Practically no demand nor movement. Market weak, confectioners, bakers and manufacturers not buying on account of plentiful supply of sugar and syrup at low prices. Supplies being bought only on hand-to-mouth basis. Dealers believe better prospects in sight after holidays. No carlot arrivals since Dec. 1.

**ST. LOUIS**—Comb: Supplies are liberal. Very little movement reported with no better prospects before the first of the year. Sales in small quantities, direct to retailers, per 24-section cases, mostly around \$7. Extracted: Supplies liberal. No sales in honey in barrels reported, and stock in cans reported moving very slowly.

**BOSTON**—Very few sales of comb-honey reported and practically none of extracted. Market for comb-honey is firm account light supplies, but unsettled for extracted.

**CHICAGO**—Demand is light and trading very slow. Bottlers are buying even lighter than wholesale grocers, mail order houses, etc. Market is weak and gradually declining on extracted.

**CINCINNATI**—Supplies liberal. Practically no demand nor movement, market very dull,

too few sales to establish market.

**CLEVELAND**—Supplies light. Practically no demand for bulk honey, limited demand for bottled goods: Bakers and confectioners not buying usual amounts due to condition of sugar market.

**DENVER**—Supplies liberal. Market barely steady. Demand and movement light.

**KANSAS CITY**—Supplies moderate. Demand and movement moderate, market dull. Dealers looking for further decline owing to large supplies still in producers' hands. Practically all factors buying only as needed. Practically no sales of beeswax.

### A Unique Christmas Card

Kenneth Hawkins, of the G. B. Lewis Co., Watertown, Wis., sent out to his many friends one of the quaintest and withal the most dainty card during the Christmas season, that came to our notice. The cards were of buff cardboard, ripple finish, and attractively printed on them was the following sentiment:

I am proud to be a beekeeper.

The 800,000 members of my craft add \$20,000,000 each year, to Uncle Sam's agricultural dividends.

Our bees increase by cross pollination, the yield of fruiting plants, in return for the nectar they sip.

Beeswax is required in the manufacture of many highly polished articles of commerce.

Sturdy pines and flowering linden trees go to make our bee hives.

Nectar transformed by the bees becomes honey, an energizing food.

Our craft makes possible a compliance with the biblical injunction: "Eat thou honey, because it is good."

I am truly proud to be a beekeeper.

One subscriber failed to renew this month, saying, "there will be little money with which to buy honey." Can anyone tell us why this reason, even if true, should keep a beeman from reading everything on the subject he can get hold of?

### BOYER'S "QUALITY-FIRST"

## Tin Honey and Syrup Containers

Are the best and cheapest in the long run. Prompt shipments of all Standard sizes and styles.

CAN MANUFACTURERS SINCE 1892. LARGE CAPACITY.

If you cannot secure them from your usual Supply House, write us your needs.

**W. W. BOYER & CO., INC.**

2327-2359 Boston St.

**BALTIMORE**

**MARYLAND**

# *The* **DOMESTIC BEEKEEPER**

SUCCESSOR TO  
*The Bee Keepers' Review*

## **The Duffy-Diehl Inc.**

17-19 S. Chester St., Pasadena, California, U. S. A.

Can supply you immediately with any number of

### **THE MAC DONALD ALUMINUM HONEY-COMB**

Hoffman Frames complete, f. o. b. Pasadena.....	60c
Langstroth Frames complete, f. o. b. Pasadena.....	60c
Jumbo Frames, f. o. b. Pasadena.....	70c
Shallow Frames complete, f. o. b. Pasadena.....	50c
The New Brood Rearing Comb, f. o. b. Pasadena.....	55c



*February 1921*

15 Cents a Copy

\$1.50 the Year

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## BEES FOR SALE

### ITALIAN BEES

(The kind that fill from two to six supers)

In eight and ten frame hives at \$12.00 and \$15.00 each. Bees shipped by express in April.

Orders booked now with part payment.

Also have comb-honey for sale at \$3.25 per case of 12 boxes.

S. C. R. I. Red Ckls. at \$3.00, \$4.00, and \$5.00 each.

Eggs for hatching (280 egg Trapnested Strain) \$2.50 per 15, \$12.00 per 100.

**Miss Lulu Goodwin**

**MANKATO, MINN.**

**"Griggs saves you freight"**

## TOLEDO

How about supplies for 1921.

Send us a list of Goods needed and we will quote prices on same.

## BEESWAX

Wanted in exchange for supplies or cash.

Send your name for new catalog.

**Griggs Bros. Co.**

Toledo, Ohio

Dept. 31

**"Griggs saves you freight"**

**Here's your chance to save many dollars from our  
Bargain List, part of which is given**

## *Send For Complete List*

Everything new and fully guaranteed—Prices f. o. b. Newark, New York

12 and 16 oz. tall, round glass jars with cardboard lined caps in 2 doz. cardboard shipping cases, per gross.....	\$7.15
500-8 and 10 Frame Excelsior covers, each.....	39c
300-8 Frame Reversible Cypress Bottom-boards, each.....	65c
4000 all wood frames, Langstroth size, each.....	4½c
1000 Unspaced all wood Fr. Reg. top bar, each.....	5½c
2500 Shallow extracting frames, each.....	5c
500 Shallow Extracting Supers with Fr., each.....	\$1.00

A complete list and samples mailed on request.

Let us render your old combs. We guarantee to extract the last drop of wax. Send for price-list and shipping tags.

**Address The Deroy Taylor Co., Newark, New York**

## Honey Producers--- Take Notice

Do you realize it is only a short time until your bees will be taken out of winter quarters? Have you thought about supplies for next season? Do not wait until swarming time for that means dollars out of your pocket. Order your supplies NOW.

We manufacture and carry in stock a complete line of Bee Supplies ready for prompt shipment. Send us a list of the supplies you wish to purchase and we will be pleased to quote you our prices. Our 1921 descriptive catalogue and price list now ready for mailing. Send us your name and address and we will mail you our catalogue.

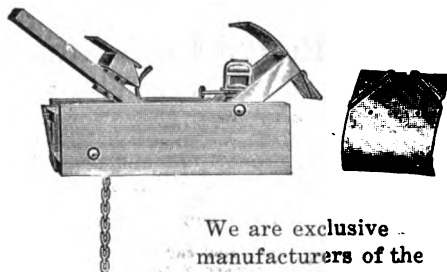
**August Lotz Company**  
Boyd, Wisconsin

## Early Orders Bring Savings

Naturally we want your order for bee supplies NOW, when we can give it better attention. Spring will soon be here, with its usual rush for supplies.

So we offer an early-order discount to beekeepers who buy NOW.

Write today for our red catalog



We are exclusive  
manufacturers of the

### Dewey Foundation Fastener

Many exacting bee men claim it is the best machine yet devised. Overcome objections common to all others. Include the Dewey in your order.

**W. T. FALCONER MFG. CO.**

Falconer (Near Jamestown) N. Y., U. S. A.

"Where the best beehives come from"

## QUEENS --- BEES

Until July 15 I will furnish untested Italian queens, Golden or three-banded, at the following prices.

One, \$1.50; six, \$8.00; dozen, \$15.00

Safe arrival and satisfaction guaranteed. I do not ship any queens that are inferior in size or color. Mating yards four miles apart.

**Bees for May and June Delivery**

Untested Italian queen with two lbs bees shipped on a comb of stores. No disease.

Price \$6.75

—Order Now—

**ROSS B. SCOTT**  
LaGrange, Indiana

## Marshfield Goods

Are made right in the timber country and we have the best facilities for shipping: DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for Catalogue of Supplies free

**Marshfield Mfg. Co.**  
Marshfield, Wis.

# MONEY SAVING PRICES

As the dollars increase in value, there is the greater incentive to save them. One way in which readers of the "Domestic" can save money on many items of supplies is to make use of our "ordering department." The goods are shipped direct from factory to you, at a material saving in price. Below we list a few of the leading items that we have been ordering for Beekeeper readers. A more complete price-list will be sent upon application.

## A Pound Flint Glass Screw Cap Jar for Honey

We have had more calls for a flint glass screw cap jar that would hold a pound of honey than all other sizes combined. The jar we have been furnishing is not the extreme tall style, neither is it the regular low jar, but one about half way between, with graceful proportions and beautiful sloping shoulder; a jar that you will be proud of when filled with beautiful honey of your own production.



H54 Jar

We quote you as follows, f. o. b. our factory in West Virginia

No. H59 pound Flint glass jar, packed 2 dozen in a paper re-shipping case, per gross.....\$8.50

We can also furnish and ship from the same factory, a nine ounce screw cap jar, that is a very desirable shape, at following prices:

No. H54 Flint glass screw cap jar, holding nine ounces of ordinary honey packed 2 dozen jars to the re-shipping case, per gross .....\$6.85

All jars have Lacquered screw caps and waxed paper liners.



H59 Jar

## Screw Cap Jar Holding 20 oz. of Honey

Packed in 2-doz. Paper re-shipping cases F. O. B. factory per gross .....\$9.25

Packed in crates, per crate of 11 dozen.....\$7.45

## Friction-Top Cans and Pails

We quote you a very good quality Friction Top Pails from Chicago, Ill.

2	lb. Cans, 612 to the crate, per crate..	\$26.00
2½	lb. Cans, 462 to the crate, per crate..	25.00
3	lb. Cans, 420 to the crate, per crate..	24.50
5	lb. Pails, 100 to the crate, per crate..	8.25
5	lb. Pails, 200 to the crate, per crate..	16.25
10	lb. Pails, 50 to the crate, per crate..	6.85
10	lb. Pails, 100 to the crate, per crate..	13.00

Friction Top Cans and Pails in Re-shipping Cases

2	lb. Cans, 24 to the case, per case.....	\$1.45
2½	lb. Cans, 24 to the case, per case.....	1.65
3	lb. Cans, 24 to the case, per case.....	2.00
5	lb. Pails, 12 to the case, per case.....	1.42
10	lb. Pails, 6 to the case, per case.....	1.20

## Sections

We are offering a good grade of comb-honey sections at a considerable reduction from regular catalog price. We sold many thousand of these sections last season, without a single complaint. We quote as follows f. o. b. factory in Wisconsin:

No. 1 stock 2-beeway sections, per 1,000.....\$15.40

No. 2 stock.....50c per M less than No. 1

Plain sections.....\$2.00 per M less than beeway in either grade

Early-order discount on sections: January, 4 % ; February, 3 % .

Early-order discounts do not apply to tin or glass containers

Address orders and inquiries to

**The Rattray-Hamilton Co., Almont, Michigan**



# *The* DOMESTIC BEEKEEPER

SUCCESSOR TO  
*The Bee Keepers' Review*

PUBLISHED MONTHLY

\$1.50 PER YEAR

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NO. 2

34

## *Fifty-three Years as a Beekeeper*

Nina C. Weiker

An apiarist who has practiced 53 years is certainly entitled to a life certificate. Such a man is Geo. A. Stinebring, of Shreve, Ohio. He is not the ranking beekeeper of the union but he is a close second. Just a brief outline of his experience as an apiarist will show that his pathway has been strewn with the bitter as well as the sweet.

Back in 1867 when he was barely out of his teens, Mr. Stinebring took unto himself a colony of bees. The following summer they swarmed, then in the fall he chanced upon an advertisement whereby a queen could be bought for \$5.00, or a full colony and box-hives for \$20.00. He made the \$20.00 purchase. After acquiring 84 colonies, fate, or rather the severe winter of 1871 and poor management, depleted his ranks to the number of four colonies. Undaunted, he started out again and continued on a large scale until recent years when he found the work becoming too burdensome. His family of little workers now numbers 30 colonies. Some of them are kept in his own garden while the others have been placed in an orchard and out on a farm.

With such a long experience, one is bound to form some opinions that are not generally accepted by others in a like business. Being personally acquainted with Mr. Stinebring for at least 25 years, the writer interviewed the veteran beekeeper who is a bee-lover as well, and below are some of his discoveries which may be new to at least a part of the bee fraternity.

"One of my pet theories is that acres and acres of blossoms will not produce honey unless the condition of the atmosphere is right.

"That dark honey that is mentioned in var-

ious bee-journals as being honeydew is not honeydew at all in my opinion. It is a sap that oozes out of the leaves of the trees caused by insects working on the under side of the leaves which the bees will gather if they can't get anything else. If other food is available, the bees won't touch this secretion. This is not honeydew and should not be called that, as honeydew is pure. The flowers take it up from the atmosphere and if it is plentiful, it may be deposited on some of the leaves of the trees or blades of grass, so that brings it to the point that weather conditions must be right to produce honey, yet we need the flowers to take up the honey from the atmosphere.

"A hive with frames less than 10 inches in depth is a very poor hive to winter bees in, as in long severe cold spells the bees may eat what little honey is above them and starve with plenty of honey in the hive. Bees will not work in pound sections unless they are deprived of a better place to store honey. I have the best success with the large frames because more honey can be stored in them and having my own extractor, the combs may easily be refilled again. One great advantage of this is that bees will store from twenty to twenty-five pounds of honey in the larger frames while they are building a pound section of comb.

"If you want to winter a colony outside, the hive should be double cased and the inside packed with leaves and sawdust, bottom as well as the sides. If the bottom is not protected, it is like trying to keep warm in a house that is sitting on a block, giving the wind and cold air a chance to get underneath. Keep the top packed until the weather gets warm. A

colony of bees does not need much air in winter.

"I have found it unprofitable to keep a queen when she is more than two years old. I lost two colonies because I kept them longer.

"Nice balmy weather, the same as in growing crops, is the best time for honey.

"Large hives are much better than small ones as they hold larger swarms and the large strong swarms are the ones that gather the honey."

Mr. Stinebring is more than just an experienced beekeeper—he is an inventor. Some years ago he invented a honey extractor and by constantly improving upon it, he now has one of the finest machines on the market. As seen in the accompanying picture, only large frames are placed in it and by rapidly revolving the cylinder holding four frames of honey, the luscious syrup is thrown against the sides of the retainer. When all the honey has been extracted from the one side, the holders are reversed and are put through the same process of revolution. The extractor may be run either by hand or by power.

With the aid of such a fine extractor, Mr. Stinebring is able to put a good, clear product on the market. Considerable credit is due the wife of Mr. Stinebring who adds a woman's final touch to marketable honey.



## *The Lemming, the Butterfly and the Beekeeper*

*E. G. LeSturgeon*

The ways of the lesser animals are inscrutable to man. John Burroughs says that they have some gifts that have been denied to man. I have just read of those little rodents, the lemmings of Norway. At more or less regular intervals they set forth in their millions to reach the sea. To do so they swim the rivers and scale the cliffs. Along the pathway of their trek they are preyed upon by bird and beast. But onward to the ocean they must go. They keep their tryst with the cold North Sea. When they reach the shore they plunge in and swim out into the deep, from which not one ever returns.

Think of those butterflies, too. There are species both in Asia and America who obey the same instinct. Some have supposed that at a previous period in the old world's history there may have been islands for them to reach but have since disappeared. No one knows if this or some other cause is the reason, but the fact remains that again and again they follow the same course, follow the same track, and are all drowned in the same waters.

How like them have been the beekeepers. The harvest comes. They rush their honey to an already glutted market. The prices fall. They organize a county, or state or national association that glitters with the splendor of mutual applause and academic theory. Countless times have they followed this course. Only here and there, in California, in Colorado, and in Texas, has a new type organization been tried,—one that takes cognizance of marketing and of co-operation in buying.

These have opened a new vista to beekeeping. Markets are no longer glutted. Grades are becoming standardized. Prices are more and more stable. The butterfly and the lemming type of producers are learning a road that is entirely free from the old time fear of disaster.

It is time that all beekeepers band together in an organization of organizations that will do for the industry as a whole what these co-operative associations have done locally. This is the mission of the American Honey Producers' League.

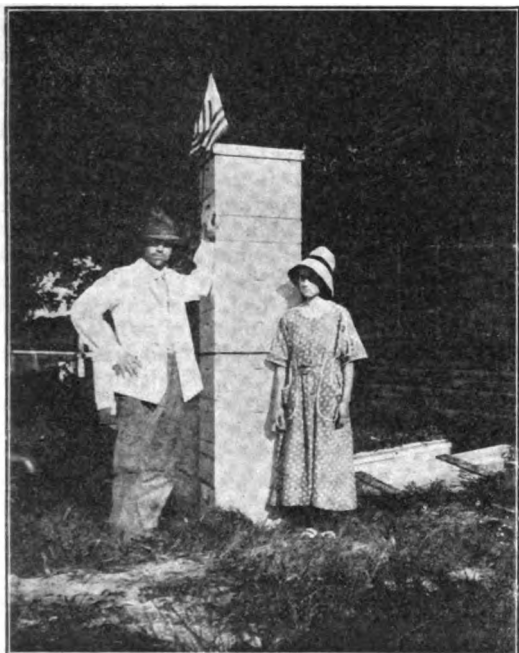


## Passing a Good Thing Along

*The Nelsons, Osage, Iowa*

We believe in the old adage "If you have a good thing don't be a darned hog; pass it along," so here goes.

We have been in the bee business for ten years. We have ten frame standard hives and all modern equipment and we try to practice



Geo. D. and C. A. Nelson, proprietors of Riverdale Apiary and S. C. W. Leghorn Farm, Osage, Iowa, and their prize stand of bees that produced 600 pounds of surplus honey in a single season.

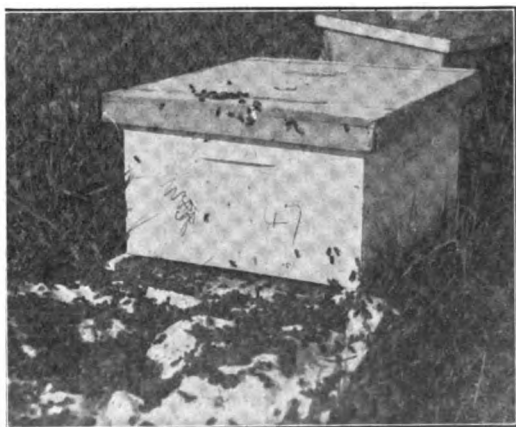
modern beekeeping. We use methods taught by our State College at Ames and we find that it pays big to do so. Last year we started the season with fifty colonies but E. F. B. hit us about the first of June so by the time we got through uniting and getting colonies up to proper strength to combat this disease we only had thirty colonies left, but the weather coming on fine with a heavy honey flow, we increased to 60 colonies and got an average of 250 pounds of fine honey, spring count. From our three best colonies that were not weakened by foulbrood we got a record yield of 480, 520 and 600 pounds respectively.

The methods we use to produce large yields of honey are not new. We aim to have our

hives overflowing with bees at the beginning of the main honey flow and to have them devote their energies to the gathering of honey instead of swarming and in order to have them do this we put on full depth supers a few days after setting our bees out of the cellar and allowing the queen the run of both bodies; if the queen is a good one she should have from ten to twelve frames of brood by the beginning of the main honey flow. She is then put below and the excluder put on and a super of drawn combs put on next and the super of brood put on top of this. Care should be taken to prevent queen cells from hatching in the upper story. If a queen should hatch above, a swarm may issue.

If we desire to increase we do so at this time by taking two frames of brood from the upper body and giving them a good young queen or if the colony is extra strong we sometimes use the entire super. Colonies started in this manner build up in fine shape and sometimes give us a surplus if the fall flow is good.

We find these methods very simple and by using plenty of ventilation and super room we secure a maximum crop of honey with very little swarming. I might add in closing that we use nine frames in the brood chamber and eight in the extracting supers. This gives better ventilation and more stores below and more honey with less handling above.



A swarm shaken onto a sheet before an empty hive will nearly always enter immediately.

# The DOMESTIC BEEKEEPER

SUCCESSOR TO  
*The Bee Keepers' Review*

LANSING MICHIGAN  
ONE DOLLAR AND FIFTY CENTS  
PER YEAR  
PUBLISHED MONTHLY

E. A. LITTLE, Lansing, Michigan  
Editor and Publisher  
ARTHUR RATTRAY, Almont, Michigan  
Associate

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SUBSCRIPTION RATE—\$1.50 per year, payable in advance. Canadian and foreign, \$2.00 per year.

DISCONTINUANCE—All subscriptions are stopped at expiration.

ADVERTISING RATES—Advertising rates will be sent on request.

## THE CONVENTION SEASON

Up to a year or so ago, the editor seldom attended a convention. Then circumstances made it imperative that we should attend one, and from that day to this, not a convention, of any character, that is even remotely likely to have something of interest to us, is missed.

It broadens a person. One cannot travel to the convention city, be it close at hand or far away, without feeling the influence. Then comes the mingling with persons engaged in the same line of business, in hotels, in the convention room; the talks which cover phases of the business on which you're hazy and need real information; the discussions afterward; perhaps the little excitements caused in the contests for elective office.

You go home after it's over, perhaps a little tired, perhaps feeling that while good, it cost a lot of money. Forget that part. What you've seen and heard and felt are priceless. You'll be a better man because of having broken away for a day or two from the steady routine. Your work will become easier, more interesting, more profitable.

By all means attend the convention of your county and state beekeepers' associations. Attend if possible the convention of the American Honey Producers' League at Indianapolis this month. And not only attend, but participate. You have ideas which will help other beekeepers. You've tried out new wrinkles, new methods, and you owe it to the industry you represent to tell others about it.

## THANK YOU, ALL OF YOU

Lucky for us we issued a pretty fair number last month. Had a lot of expirations with the December issue, and it came out later that quite a number were all ready to discontinue their subscriptions because the journal (to be perfectly honest) during the last few months, had been dwindling in size and interest to quite an extent. This is no fault of the present management, nor of the old management, because the ill health of our predecessor, and a rush of work which kept him swamped most of the time, prevented the journal being given the attention it deserved.

But the January issue was a big improvement. Our readers noticed it, and they wrote in and told us they had. Letter after letter was received, reading to the effect that discontinuance had been decided upon, but the receipt of the January issue had caused a change of heart, and they were with us wholeheartedly in our efforts to issue a real journal, one that would live up to our new slogan, "The livest bee-journal published."

There still remain a number of subscribers who have not yet renewed. We have no wish to be arbitrary, and feel we should give full and reasonable opportunity to all to renew. But the postoffice department requires that we keep our list paid in advance, and if renewals are not made promptly we have no other course but to remove their names from the list. So here's public warning to do it soon.

Frankly we're pleased with the way the renewals are coming in. And also with the way the new subscriptions are coming in. It means a lot. The only way we can repay is in issuing a better journal every month, and this we plan on doing.

It also has made us bold. We're going to ask every present subscriber to send in a subscription for a beekeeping friend. You may send us just his name, if you want to, and we'll send him a sample copy. Or send in \$1.50 and pay for a year for him. He'll be your friend for life, and you'll also have made a steadfast friend in the editor.

## Best Wishes From Missouri

J. E. Enyart of McFall, Mo., has just recently written us as follows:

"I am enclosing renewal for 1921; hope you will make *The Domestic Beekeeper* a humming bee paper.

"I will say last season was a fine bee year for us Missouri people. I had two colonies of 10-frame hives that made me \$50.40 per colony of the finest comb-honey I ever saw; 4¼x4¼x1½ averaged 1 lb. 2 oz. to the section. I have eight bee trees standing in the woods to transfer in the spring. I use 8 and 10-frame Langstroths; am thinking of using a larger hive. I will close, hoping all beekeepers will have a good season."

## Michigan Bee Men Have Fine Meeting

### *Excellent Talks, Helpful Discussions, Good Fellowship, Make It a Record-breaker*

The 55th annual convention of the Michigan Beekeepers' Association came to a conclusion Jan. 27, after three days filled with benefit and pleasure to between 75 and 100 members who visited Lansing over the session. Considering the condition of the honey market, the depression generally the last few months, officers were well pleased with the turnout. Programs were well arranged, the talks by men of prominence in the industry created the greatest interest, and the discussions were participated in by many of the rank and file.

The opening session was called to order at 10 a. m., Tuesday, Jan. 25, in the council room of the city hall by President A. P. Button of Ortonville. He introduced Mayor Keyes of Lansing, who extended a welcome to the beekeepers in behalf of the community. President Button responded.

R. H. Kelty of M. A. C., secretary, read his annual report, which was characterized by the president as a "report of progress." A gain in membership had been made during the year. The state association now claiming about 850 members. Treasurer Tyrrell made his report, showing a fair sum in the treasury.

Under reports of standing committees Chairman Punt talked briefly on proposed legislation affecting the beekeepers. Chairman Tyrrell spoke on the state fair exhibits and the way in which they were handled, and plead for better marketing methods. A talk on insurance was given by State Extension Director Youell.

#### Afternoon Session

Mr. and Mrs. Floyd Markham of Ypsilanti opened the afternoon session with a piano and violin selection, much appreciated. The subject "Shall the Michigan Beekeepers' Association Incorporate?" was discussed by Colin P. Campbell of Grand Rapids. He showed the difference between incorporated and voluntary bodies, and his belief was that it would not be wise to incorporate.

"Queen Rearing" was the important subject assigned to Jay Smith of Vincennes, Ind., who beekeepers know as one of the foremost breeders of the United States. It was his first trip to Michigan, and the reception accorded him leads to the belief that he'll come again. He believes every beekeeper should rear his own queens, and endeavored to tell those present how to do it. He told of various methods being used by the queen breeders, and of the methods he had found best. At its conclusion and at intervals all through the convention, Mr.

Smith was asked hundreds of questions on the subject, and was able to present the matter of queen rearing in a manner understood by all.

"Colony Morale" was the subject of George Demuth, editor of *Gleanings*. Mr. Demuth, one of the best known of the country's beekeeping experts, gave a delightful resume of the entire subject of morale, showing how a beekeeper may use methods tending to increase the trips of the field workers from two or four to six trips or more per day, and increase their honey production in the same proportion.

#### Second Day Meeting

The morning meeting Wednesday, Jan. 26, was held at M. A. C., and after a vocal selection by Mrs. D. L. Ullman of Standish, Prof. A. J. Clark of the chemical department of the college discussed "The Chemistry of Honey." Following his address and discussion, Prof. F. A. Spragg of the farm crops department talked on "Annual White Sweet Clover." Both addresses were highly instructive and interesting. A group photo of the entire gathering was taken on the college campus.

The afternoon session welcomed Prof. F. Eric Millen, provincial apiarist, Ontario Agricultural College, Guelph, Ont. Prof. Millen is a former Michigan man who has risen high in beekeeping circles. He spoke on "Successful Beekeeping," and dwelt on the practical side of the business, showing the successful beekeeper must become more proficient in salesmanship, advertising, bookkeeping, etc., in order that his work and study among bees will show a profit.

"Swarming" was discussed at length by George Demuth. He presented the various methods of swarm prevention used by the old masters, and the handling of the swarming problem from every angle. He believes swarming may be controlled until it will not be as much of a problem as in past years, though never entirely eradicated.

Jay Smith again obliged with further explanation of queen rearing.

#### The Banquet

The annual banquet was held in the parlors of the First Baptist church. After a splendid repast, Toastmaster Kelty called on many of the spellbinders for remarks. The complete program is not at hand, but every person called upon entered into the spirit of good fellowship and did his best. Most of the talks were humorous, though serious at times. Several

state legislators were present, and promised their best efforts in support of measures affecting the beekeepers, one legislator even saying the state body would pass legislation providing that bees shall accept strange queens peaceably or be sent to prison. The M. A. C. mandolin club gave several selections, Mrs. Ullman sang two selections, accompanied by Mrs. Markham, and E. A. Little, editor of *The Domestic Beekeeper*, obliged on the piano.

### The Last Session

The final session Thursday morning, Jan. 27, was opened with reports of county associations. There were a half dozen or more of these, and while in some counties it was reported the interest was not overly strong, except at times when a state officer was to address them, or a field demonstration scheduled, in others, interest is maintained throughout the year. Oakland county is probably the most active of any. Bay county, Kent, Gratiot, and several others were able to report progress. Director Youell told of the work he had done in stimulating interest through bee schools and demonstrations over the state.

In the general business session, the work of the American Honey Producers' League was presented by Colin P. Campbell. He dwelt on the tariff problem, and presented a resolution, which was adopted, calling for a tariff which will equalize conditions between the United States and foreign countries, in particular those of the tropics, where labor conditions and the hot weather enable honey to be produced the year round at exceptionally small cost.

Prof. B. F. Kindig offered a resolution, which was passed, asking that a committee be appointed to wait on Gov. Groesbeck and present the wishes of the beekeepers as regards the reorganization bills being presented to the legislature. Later the regular legislative committee of the state association was named to perform this duty.

The committee on resolutions, under the chairmanship of Floyd Markham, reported recommendations thanking the city of Lansing and its officials for the welcome extended the beekeepers, directing the legislative committee to take steps to have sweet clover stricken from the list of noxious weeds, and favoring the passage of a law, with proper punishment for violation, prohibiting spraying of orchards while in bloom, with an arsenical solution. These resolutions, recommended by the committee, were adopted. An additional resolution, slightly amended, presented by Mr. Tyrrell, expressed appreciation to Manager Dickinson of the state fair for his interest in and co-operation with beekeepers.

The matter of handling the state fair exhibit this year was turned over to the Honey Pro-

ducers' Exchange by vote of the association.

The nominations committee presented the following names for election, the action of the association being unanimous in favor: President, A. P. Button, Ortonville; vice president, Frank Rasmussen, Greenville; secretary-treasurer, R. H. Kelty, East Lansing; additional members of the board of directors, Ira Bartlett, East Jordan, and David Running, Fillion.

Twelve prizes, five of them smokers donated by the Woodman Co. of Grand Rapids, and seven prizes of \$2 in trade either with M. H. Hunt & Son or the Honey Producers' Exchange, were won in the drawing which preceded adjournment, by the following: Messrs. Kindig, Westmaker, Little, Markham, Cheney, Keenman, C. W. Kirker, Glover, Abbott, W. H. Kirker, P. T. Ullman and M. H. Hunt. Adjournment was taken at noon, every beekeeper feeling that the convention had been one of the most successful in many years.

### HOW THE SITUATION LOOKS TO PROF. B. F. KINDIG

The market for extracted honey continues poor. There has been no particular change in price since the last report and the demand does not seem to be any greater. The larger buyers and bottlers of honey seem to feel that after the holidays the market will improve considerably. Michigan is in worse shape as a market than most of the other states because the slowing down of the automobile industry has effected a higher percentage of our population.

In a recent visit to Chicago it was found there that the housewives were buying honey apparently as freely as ever. It is reported, however, that the eastern cities are not buying their usual amount. If the automobile plants resume operations, the Michigan market for honey will respond very quickly. The market is to a large extent free from comb honey. The demand for comb honey continues to be good, with very little being offered. Comb honey has not felt the slump in prices that has so seriously affected the extracted honey trade. The market on buckwheat and the darker grades of extracted honey is practically at a standstill. This comes about largely because of the lowering of the price of the better grades and also because bakers and others using the darker grades of honey are now able to secure adequate supplies of Cuban, Porto Rican and other southern honeys at a price considerably below the present price of sugar.

### Shall We Have an Import Duty on Honey?

At the meeting of the executive committee of the American Honey Producers' League held in Chicago, the question of advocating a duty on honey was brought up. Unfortunately the

question had not been previously submitted to those in attendance and very few were sufficiently informed regarding the necessity for a tariff and its effects to speak intelligently on the subject. We at present have a tariff which imposes an import duty of 10 cents per gallon on honey. Canada, our nearest neighbor, charges us 36 cents per gallon if we wish to ship our honey there; while Canadians can ship theirs here for only 10 cents per gallon. We are now feeling the results of a low tariff on both honey and wax which is coming in from foreign countries. The large quantities of African beeswax which are now being dropped on the New York market have broken the price of American beeswax more than 10 cents per pound. At the same time dark honey from Central America and adjacent Islands is being sold in New York with duty paid at from 60 cents to 70 cents per gallon. These two examples show us why beeswax is now worth only 30 cents per pound and why our darker honeys cannot find a place on the market.

Any beekeeper to whom these observations make any appeal should write to his congressman stating how he feels in regard to this matter.

### A HANDY CONTRIVANCE

A. H. Schmidt of Hugo, Minn., is using the contrivance shown in the accompanying sketch, when necessary to move a hive from one place to another. He has generously placed the idea before the readers of this journal and believes many can find a similar device of much use about the apiary. His letter which accompanied the sketch describes the device fully, as follows:

"I would like to make known a little mechanical appliance for carrying bee hives that you might publish if you think it worth while. I have not had a chance to give it a satisfactory test, but the trials I made seemed to give quite an advantage for either one or two men carrying, holding the top board and bottom board snugly in place. I showed a similar appliance at the Minnesota state fair and won first prize on it, and the approval of many of the beekeepers that saw it. I have no patent on it, so any beekeeper can make one. It can be easily made by using four hooks fastened in pairs to hook under the bottom board, at the top of the hooks bend eyes through which a clothes line rope is passed; handles may then be fastened to the ropes.

"Being a poor artist I could not make a good drawing of it but am enclosing a rough sketch of it which may give you the idea and possibly you can draw a better one, if you wish to print it.

"I do not want any compensation for it but hope to be of help to fellow beekeepers who

have given me many useful hints through the bee papers. I also suggest it be free to other bee papers should they wish to copy it."

### HOW TO KILL YOUR STATE

#### OR COUNTY ASSOCIATION

When we have meetings, especially the annual meeting, don't come.

If you do come, come late.

If it is too wet, too dry, too hot, too cold, stay at home.

When you come, be sure and find fault.

Don't do anything to help.

Don't take part in the meetings.

Try not to encourage the officers. They don't need it.

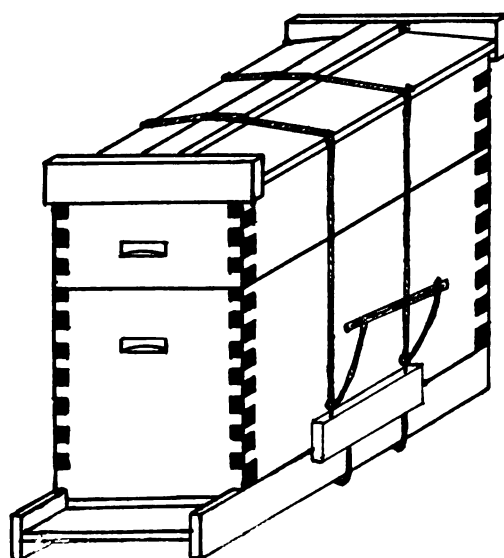
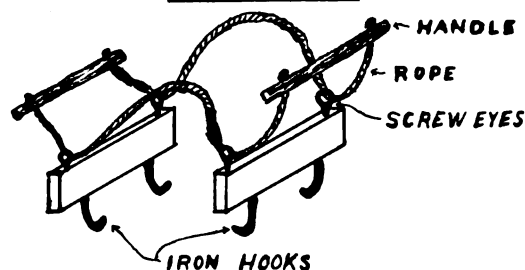
Believe everything you hear. Never investigate.

If you have a friend who does not belong, use your influence to keep him from joining.

If everything is running smoothly, start something.

If you stay away from the meeting, be sure to criticize all actions taken by those present.

Always knock, never boost.



## Winter Work

J. E. Crane

Winter is a season of rest. Many of our wild animals retire to their nests or dens and sleep or hibernate the long winter away. The birds have gone to the far away southland, where they may live their care-free gypsy lives without a thought of nest building or brood rearing. The trees have shed their leaves and wave their bare branches in the wind as much as to say, "Our work for the year is over and now we rest till the birds come back to sing to us and the warm sun thaws the cold earth about our feet." The ants that have been so busy during the warm summer months have retired to their deepest galleries in the earth to avoid the cold and frequent changes of temperature, there to remain for weeks or months chilled or frozen into unconscious rest. How nice it would be if our bees could thus sleep away the long winter. How it would help solve the problem of wintering bees. But no; the bees must keep awake that at the first signs of spring they may be ready to rear hundreds and thousands, yes hundreds of thousands of young bees to carry the vital pollen from tree to tree and from flower to flower.

What a puzzle this old world is. Not until we have studied different parts and noticed how they are made to go together, dovetailed together as it were, may we come in some measure to understand it.

And man, like the bees, must keep awake during this season of rest if he would be a successful beekeeper, but the shorter hours of light remind him that this is the season of rest.

While there is not much work with the bees, he may find time to visit other beekeepers or conventions of beekeepers, and read up the bee journals he has had no time to do during the busy summer months.

If he is a wise man he will now take an inventory of his bees. See just how many colonies he has, how many empty hives, how many combs stored away for next season's use. He will lay his plans for the coming year, make a list of what he needs to carry out his plans. The number of new hives and supers, the number of sections if he is to produce comb honey, the amount of thin and medium or heavy foundation, smokers if needed, and so on to the end.

Not only will he make a list of his wants, but he will at once order them from some responsible house. Talking with an amateur beekeeper a year ago, he told me how he or-

dered his supplies rather late and fearing they would not arrive in season he sent a duplicate order to a house near by, but neither lot was received in season to be of much use to him and many of his swarms went to the woods for lack of hives for them. Many years ago I thought I would furnish supplies to other beekeepers as I was living in the center of a considerable number of beekeepers, but I soon learned that the average beekeeper did not appear to want their supplies until their bees began to swarm and I was too busy with my own to care to take the time to wait on them, and so I threw up the supply business.

Not only should supplies be ordered early but there is much work to be done by the beekeeper himself if he is to be ready when the warm spring days come, so he will not have to confine himself to shop work. Smokers often need repairs which he can do himself. Sections and hives are to be put together, supers made if he has not enough. If the beekeeper is running outyards and uses an automobile or auto truck, these should be overhauled and put in first class condition so that when needed they may be ready. The honey house may be cleaned out and all useless stuff put out of the way, queen cages and everything needed in the busy season made and in place. The windows of the honey rooms may at this season be washed without danger of the bees getting in to do harm.

The scraps of old comb, the drone comb that has been cut from worker combs, with all poor or discarded combs and cappings, can be melted and wax extracted and sent to be made into foundation.

If one keeps many bees, there is much that may be done in winter profitably. Those who keep few bees usually have other work, as a small farm or they are interested in fruit growing or the raising of poultry, so that such should be quite as much interested in getting all their winter work for their bees out of the way before the season opens so they can work in the open.

Suggestions for improving this journal are still wanted. We can't make it just as fine as we'd like to have it in an instant, but with a stock of suggestions on hand, we'll know whether we're headed the right way or not. Send 'em in—and include a short article telling of any interesting experiences you've had. The rest of our large and growing family will be glad to read them.

## Seasonable Notes

*Hy. W. Sanders, Sturgeon Creek, Man. Canada*

The rendering of beeswax is one of the jobs that can well be saved for winter, and it is a much neglected source of revenue for the beekeeper. Nine out of ten beekeepers that one visits have got a few pounds of beeswax thrown into some box or tub somewhere in the honey house, or a pile of old combs around or even a shelf decorated with a few nice yellow cakes of beeswax that they have melted and have never yet marketed. This is just simply money lying idle, and in the winter season, when the bees are safely in the cellar, or packed in their winter cases under the snow, it is a good job to clean up. A few hints on the process may not be amiss.

Cappings are the easiest form of beeswax to handle, and a capping melter saves a heap of trouble, both at extracting time and afterwards. The books all give accounts of barrels into which the cappings are to fall as they come off the knife, and then after being drained for so long into a tub, they will be "nearly dry." We have found it a much better way to simply uncap directly into the tank of the melter, the water inside it being kept hot by a little oil, or gasoline stove. Immediately the wax melts, and the honey and wax run out into a second vessel. The wax being lighter floats on top and runs off through one spout, and the honey runs under a partition and out of another spout. After a day's work the second vessel can be allowed to cool and then the cake of wax lifted off. The honey is run right into the tank with the other honey and we never noticed that it was there by any difference of smell or flavor. We thus have no barrels of capping draining about the premises, only just a series of nice cakes of fairly pure wax.

Old combs are quite a different proposition, and pressure is very necessary to get anything like the full amount of wax out of them. As I have explained in this column before we aim to discard a certain proportion of old combs each year, and we have scrapings from those that are retained. In addition to this, we keep a little box in the yard and throw into it any odds and ends of wax, thereby accumulating some quantity in the course of a season. All this is now ready for our rendering job.

I suppose a wax-press such as is described in the catalogues would do much better work but we have never had room for one, nor enough work for one, so I still use the old fashioned tongs. The wax refuse is put into a bag, (a 24 pound flour bag does very well), tied up and dropped into a boilerful of boiling water. Soon the water and heat penetrate the bag and the

wax within melts. Some will come to the surface of the water right away, but most will remain with the cocoon skins inside the bag. We have a pair of tongs consisting of two short boards with a strong hinge at the end joining them together. This hinged end is inserted into the boiler and the bag is gripped and pinched vigorously by the apparatus. Wax will be squeezed out. Then the bag is folded over and squeezed in a new place and so on till it is wrung dry. It is then shaken out and again boiled and squeezed, and I find that twice usually gets most of the wax out. Then the wax on the surface is removed with a dipper and poured into a soapy pail. The bag is again filled, again boiled, and again squeezed. When all the refuse is thus treated, the boiler is allowed to cool. The wax will come off in a cake, and we are now ready for the last process. The "slum gum" from the bag is dried and used to light fires—it is fine for that purpose.

The boiler is emptied and cleaned, and all the cakes of wax are scraped to get the most of the dirt off them. Then the boiler is again filled with clean water, and all the cakes of wax thrown in. The cakes from the cappings are added and all are melted. Pails are now again soaped and the wax and water dipped off and poured in. They are then kept hot as long as possible. I generally arrange to do this job last thing at night, then leave them on the stove, with a fire below and cover with something non-inflammable. As the fire dies away they will slowly cool and in the morning you will have nice clean cakes, the small amount of impurities left being all at the bottom of the cakes.

A word of warning should be given of the danger of fire. If the boiler be permitted to boil over it will send molten wax into the fire. This is as inflammable as oil and will burn the house down in quick time. A narrow escape the first time we tried has made me very careful not to leave the boiler on the fire except when I am there, to keep a pail of sand handy for extinguishing purposes, and to be sure that the fire left at night is so nearly out as to leave no chance of boiling over.

The home market should be cultivated in 1921 as never before. Except for some regions such as California which certainly do produce a great deal more honey than they can possibly consume, there is a home market at every beekeeper's door. It is no good trying to sell

honey, however, that is poorly put up and unlabeled. The marketing should be as carefully attended to as for butter. Nice clean jars, washed after bottling to make them shine, a good neat label, and a reasonable price are the best recommendation, and a sign "Honey for Sale" will bring customers to your door from far and near. It is sometimes possible for a working arrangement to be made between the beekeeper and his wife. She does the fixing up and selling from the house, and pays over to her husband the wholesale price, getting the retail profit for herself.

In re-reading the reviews on the life of Dr. Miller that have been appearing in the bee-journals I am much struck with the extent to which his success is due to his practice of giving the bees two hive bodies for breeding up in previous to the honey flow. If bees have been wintered right, they will have so many bees in the spring that an 8-frame hive is

filled too soon, and swarms just as things are beginning to get interesting. Of course if the swarm is hived on the old stand and given supers they may produce a good crop of honey, but far better it is to keep them from swarming altogether and have the whole mass of bees making comb honey in supers on the one stand. Dr. Miller was the first to put this into practice and he did all sorts of things to stop them from swarming. That second hive body gave them so much room that they were kept from swarming for quite a while. Then when the supers were given to them they started right up into them. From this point swarming was kept down by the once-a-week inspection, the "put-up," "excluder" or "requeening" plans, and if there was a ghost of a chance, Dr. Miller got his crop. That double hive body early on, though, was the foundation stone of the system.

Wishing you prosperity and a good honey flow for 1921.

## Corn Syrup

*A. F. Bonney, Buck Grove, Iowa*

In a recent publication of nation-wide circulation I read:

### "Corn Syrup Breaks Record"

"In 1919 this country exported over 255,000,000 pounds of corn syrup at an average price of six cents a pound. As a result of the sugar famine, corn syrup, which is distinctively an American product, has become a real substitute and the output this year, owing to the huge corn crop, will probably break last year's record."

In addition to the amount of corn syrup exported we must add that which was consumed at home, and while I have no data at hand, it is not unreasonable to suppose that this will easily amount to twice to four times the amount exported, or a grand total of approximately 675,000,000 pounds.

This is not an advertisement for corn syrup, but I call attention to it merely because this artificial product, which is not sweet enough to compete with other syrups and honey without the addition of cane sugar, comes in direct competition with honey, and is a dangerous competitor when we consider the price of six cents a pound.

There is another lesson in it, namely, that of constant supply, and yet one more, advertis-

ing. If when all expenses are paid there remains but a profit of one-fourth of one cent a pound they have the neat sum of more than one and a quarter million dollars. Can we, the honey producers of the country do business on that margin?

I think all this points to two things: First, the beekeepers of the country must depend first, on local sales to get rid of their crops, and second, we must all combine, possibly through the Producers' League, to advertise honey nationally; and this done find some way to supply the demand created. The manufacturers of corn syrup are able to keep up the supply which their advertising creates, for theirs is a mechanical and chemical process, the treatment of corn starch with dilute sulphuric acid, after the starch has been separated mechanically, but we are confined to the honey flow, which sometimes fails us.

It seems ridiculous that honey produced in Iowa must be shipped to eastern points, there put into unedible glass jars to be reshipped back to where it was produced to be sold at twice to three times what the producer got for it. I firmly believe that if the honey producers of the state were educated in better advertising and distributing methods, 50 to 100 per cent of the honey we get could be sold within a radius of twenty-five miles from the producer's home.



## *Did You Ever Actually See a Mating?*

### *Oregon Apiarist Observes Mating Process and Writes of His Observations*

The following letter, and a reply received from the assistant entomologist of Oregon, were sent us by Leo D. Marsh of Aurora, Ore. The occurrence, while it dealt with bumble bees, must be of much interest to beekeepers everywhere, and brings up plenty of opportunity for conjecture and possible discussion.

"I have read or in some way obtained the impression that the mating of queen bees is more or less the assuming of a premise, that they mate in the air. I shall herewith reveal some facts which may or may not give valid proof as to their mating in the air. Due to my limited knowledge of entomology I shall present the facts as I had the pleasure of seeing them, and allow some one else to draw a conclusion.

"On Aug. 18, 1916, I observed a queen bumble bee mating in the air and on the ground. This is what I witnessed: Two bumble bees, a queen and drone, raised from the ground and flew a few yards, then sinking to the ground, would roll and tumble about for a brief time, then fly in the air, repeating the same as they did before. This lasted for about thirty minutes, when they separated and went their way. I then made an inquiry of our state college in regard to what I saw and this is the reply I received:

Oregon State Ag. College,  
Corvallis, Ore.

Mr. Leo D. Marsh,  
Aurora, Ore.

Dear Sir:—

Your letter of Aug. 18, addressed to the en-

tomologist of the college, is at hand.

Regarding your observations on bumble bees, I wish to state that familiar as the bumble bees are, their habits are but imperfectly known. The queen hibernates in the spring and starts a colony, utilizing frequently for this purpose the deserted nest of a field mouse or sometimes the burrow of a mole or gopher. The queen lays her eggs in a small mass of pollen mixed with nectar. The larvae eat out cavities in the mass of food and when full grown spin silken cocoons, from which the adults cut their way out; the empty cocoons being subsequently used as a receptacle for honey.

The workers at first are produced and they at once relieve the queen of the duties of making pollen for the young, etc. The workers are of different sizes, the smaller ones being nursers or builders and the larger ones foragers.

In the late summer the females are reared, issue from the nest and mate. I wish to state here that I have never observed the matings of bumble bees and no doubt it is an occurrence which is not very often observed. With the oncoming of cold weather the males and workers gradually die, leaving the two fertilized young queens to live through the winter. These are the founders of next year's colony.

Very truly yours,

C. F. MOZNETTE,

Assistant Entomologist.

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## *Selling the Honey Crop*

*C. A. Bunch, Lakeville, Ind.*

Nearly all our honey, 7,600 pounds, was put up in 10-pound friction top tin pails. About one-half was sold as clover honey, the balance was purposely mixed with the fall flow of honey, which sold as clover and fall flower blend. Perhaps 15 per cent of our honey was from fall flowers. To catch the joy riders we would place a small adv. in our county newspapers once or twice a week for two months or more, which cost eight or ten dollars. Since we have our farm of 86 acres, besides the bees, each adv. stated that the honey is for sale here at the farm, put up in 10-pound pails.

This plan worked out fine; we think that about 90 per cent of our honey was sold right here at the apiary, while we shipped a few hundred pounds of honey in 60-pound cans, two cans to a case, to some of our old customers in Illinois and other states. All our honey sold in 10-pound pails brought \$2.25 per pail here at the apiary, while a few pails delivered to the express office we charged extra for boxing. For the last ten or fifteen years or maybe longer we have mixed the clover and basswood with the honey from fall flowers, which is done this way: Fill the large settling

cans, 2½ feet in diameter and 4 feet deep, about one-half or two-thirds full of the light colored honey, and when we take off the fall honey, finish filling the cans, which makes a nice blend and our customers are pleased.

We also have some signs put up in the front yard which read "Honey for Sale." Our sales for honey here at home run nearly \$50 for some days, besides we sold potatoes and apples also.

### An Attractive Label

C. A. Bunch & Sons, of Lakeville, Ind., are using a mighty neat label for the portion of their honey crop which is put up in glass jars. It is small, the upper portion, enclosed by a border, reading "Warranted Pure Honey, from the apiary of C. A. Bunch & Sons, Lakeville, Ind." Outside the border, in small type, is the following: "Note—Cool or cold weather will cause pure honey to granulate. To liquify honey place the package in warm water. BUT NOT BOILING."

Many honey producers have designed attractive labels but few are the equals of this one. It is to be hoped that many who are either using no labels at all, or who might better dispense with the poor excuses they are now using, will see the light. Attractive labels mean more sales, at better prices.

### IOWA RANKS FIFTH

The bees of Iowa have a present value of approximately \$2,250,000, and the equipment pertaining to the raising of the annual bee crop is estimated at \$1,750,000, making a total of approximately \$4,000,000 invested in the bee industry in this state, according to the report of F. B. Paddock of Ames, the state apiarist, recently submitted to the state agricultural department here.

Parts of Mr. Paddock's report read:

"Iowa ranks fifth among the states in the number of bee colonies owned. On an area basis, Iowa contains as many colonies of bees as any state in the union.

"Beekeeping is not a local business in Iowa. It extends to the four corners of the state. It could be increased several fold without crowding and without danger of over-production.

"Bees are of more value to agriculture in general than apiculture in particular. Certain crops cannot be successfully grown without the bee as a pollenizing agent. Many crops are wonderfully improved by the presence of bees. The successful beekeeper must know the floral and climatic conditions of his locality.

"Wax is a considerable by-product of beekeeping. Each colony produces from one to three pounds annually. It sells for cash at 35 cents a pound. Iowa beekeepers can produce more than \$1,000,000 worth annually.

## Notes From the Middlewest

J. W. Stine

In Mr. Sanders' "Seasonable Notes" in the January number of *The Domestic Beekeeper*, page 13, he asks, "How many clip their queens in producing extracted honey?" and I must plead guilty of having practiced the clipping of queens in my earlier beekeeping experiences. I clipped the queen for two reasons, keeping the new swarms from absconding and keeping a record of the queen as to her age and prolificness. In modern beekeeping there is no need for this extra work of hunting the queen and clipping her wings, for if each individual colony is given the proper attention at the right time there is not the danger of swarming as when the colony is left to its own propensities. This being the case and a proper record being kept of each colony, the age of the queen, her prolificness and general characteristics are tabulated. My increase is practically all made by artificial means and the purchasing of new swarms from other beekeepers.

I have seen a number of swarms which had taken up their abode in chimneys, but I have never been successful in taking the colony from these places, although I have secured swarms from all shapes and sizes of boxes and from hollow trees. This will illustrate how

some other things may make their escape from just as difficult a place:

"A flea and a fly in a flue were imprisoned.

Now what would they do?

Said the fly, 'Let us flee.'

'Let us fly,' said the flea.

And they flew through a flaw in the flue."

D. D. Wilson of Burlington, Iowa, one of our most interested Des Moines county beekeepers, is greatly bereaved in the recent death of his daughter, Coralie, and he and his wife have the sympathy of all in their sorrow.

We were quite interested in what Eugene Holloway, on page 20 of the January number of the *American Bee Journal*, has to say about bees not accepting a queen. We had some beekeepers last season who said they had been told to leave the colonies queenless a day or two or perhaps three or four days before introducing the new queen. Now I am quite sure the orthodox way would be to put the new queen in as soon as she arrived. Then look at the colony in about 24 or 30 hours to see if the bees have eaten through the candy in the cage to liberate her. If she has not been liberated within two days liberate the queen, providing the bees are friendly to her.

## Little Notes of the Industry

The annual meeting of the North Carolina State Beekeepers' Association was held in Wilmington Jan. 11. Headliners were C. P. Dadant, J. J. Wilder and C. L. Sams of the State University.

\* \* \* \*

This department isn't so easy to put together as it looks. If you've got any little notes of the industry concealed in your system, send them in.

\* \* \* \*

Beekeepers of Iowa planned a meeting of special interest for February 8, in Burlington. The question of becoming affiliated with and electing a delegate to the American Honey Producers' League was to be discussed, and a program of practical value and interest was arranged.

\* \* \* \*

Annual meeting of the American Honey Producers' League at Indianapolis, Ind. February 15, 16 and 17. Indications are that it will bring together a large number of the most prominent men of the county interested in beekeeping and honey production. Be there, if it is physically possible.

\* \* \* \*

This journal has on hand back numbers for the six months starting with April, 1920, which contain much valuable information. While they last we'll send a set of six for 35 cents.

\* \* \* \*

The Eastern Massachusetts Society of Beekeepers held a well attended meeting at the state house, Boston, January 8. The principal speaker was M. L. Fernald, professor of natural history at Harvard University.

\* \* \* \*

We are in receipt of an attractive little paper called Bees and Honey, official publication of the Alameda County (Calif.) Beekeepers' Association. There is quite a lot of interesting material in the four pages, it has considerable advertising support, and the idea could well be copied by other associations.

Down in Evansville, Ind., they're using the movies to impart instruction in beekeeping. A class in the night school of the Central High school is being taught to make hives, wire foundation and raise queens. The class is being instructed by J. C. Wallenmeyer, and lectures are given by Jay Smith, well known queen breeder.

\* \* \* \*

Honey valued at \$48,917.50 was exported during the last calendar year from Guatemala to the United States. It is said climatic and other conditions on the entire Pacific slope of Guatemala are almost ideal for the successful operation of apiaries. Bees work throughout the year and production is much greater per hive than in the states. Moreover the honey is of excellent quality and flavor.

\* \* \* \*

We haven't tasted it, nor do we positively know it to be true, but over in New York state they say honey, combined with a commodity called in that section "sky juice," produces an article known as mathiglm, claimed to be more palatable and soothing than anything yet produced by the home-brewists. Nevertheless, honey prices in the state have continued to decline and the state beekeepers recently held a meeting to discuss selling plans, further co-operation and better organization.

\* \* \* \*

The sixteenth annual convention of the Tennessee State Beekeepers' Association, which was joined by the state nurserymen and the horticultural society, was held in Nashville January 25, 26 and 27. A splendid program was enjoyed, consisting of excellent talks and full discussions, participated in by some of the best known apiarists of the country. Attendance was large.

\* \* \* \*

The annual meeting of the California State Beekeepers' Association will be held at Oakland March 2, 3, 4, 5, 1921. Preparations are being made to entertain a record-breaking crowd.

## Honey-Producers Marketing Their Own Crops

*George W. York, Spokane, Wash.*

I am glad to see the continued trend toward co-operation, and particularly along agricultural lines. The fact is, there are too many middlemen everywhere. At least one-half of them should be compelled to get out and produce something themselves, instead of living off the producers and consumers by adding extra expense with no adequate return in service

to their fellow men.

There is really no good reason why honey producers cannot get together for the marketing of their crops, and possibly also for purchasing the bulk of the supplies necessary to run their business properly. The dairymen in several states have done this, and are running co-operative creameries, milk condensar-

ies, etc. If they can do it, and make a success of it, why cannot honey producers?

Again, many honey producers can, with a little thought and effort, dispose of all their own crops in a semi-retail way. Let me tell what at least one large producer in the Pacific northwest has done with his 1920 crop of some 60,000 pounds of honey.

He was not satisfied to take less than 20 cents a pound for his car of honey, and as it did not move, he decided to re-can it in 5 and 10 pound tin pails, even if it was already in 5-gallon cans. He rigged up a re-liquefying tank, and soon had it all in the smaller packages and ready for delivery.

Then he put out two or three salesmen right in his own state, and one of them sold and delivered 3,000 pounds in 5 days, and all at 30 cents a pound!—a 5-pound pail for \$1.50 and a 10-pound pail for \$3.00. And the larger demand was for the 10-pound size.

The salesman would take a 10-pound pail, and go from house to house and take orders to be filled in a day or two. He would let the lady of the house and the children have a good taste, when, of course, they would buy, as the honey was "the best ever," gathered from alfalfa and sweet clover. The salesman always

solicited from the kitchen end of the house.

I dare say that another year this particular beekeeper will have no trouble at all to dispose of his honey crop, no matter how large it may be. He has around 200 colonies, and they averaged over 200 pounds of honey per colony the past season. One year they averaged over 400 pounds per colony, of extracted honey.

It is true that most honey producers are not salesmen; but in that case they can well afford to employ good salesmen that will not only earn fair wages themselves, but will realize a better price for the producer than to sell to dealers in carload lots.

Besides this, the people are thus induced to use more honey, as it is delivered right to their kitchen doors, and in much larger quantities than if gotten at the grocery stores, where it is now put up and retailed in small and expensive glass packages at about 50 cents a pound.

Let the good work go on, until everybody has had a chance to get all the honey they want, when, no matter how much honey is produced, the supply will still be much less than the demand. The more good honey that is sold this year, the more can be sold next year, and with less effort, too.

## QUESTIONS AND ANSWERS

Beekeepers' questions will be answered the next issue after receipt by specialists who know what they're talking about. If you have problems that appear hard to solve, or phases of beekeeping you need information about, ASK US! Questions should reach us by the 15th of each month.

"Which has the most influence upon the offspring, the queen or the drone? As to the size of brood-chambers, have they any influence on making a queen prolific or a chance to display what they can do? All queen breeders ought to express themselves on these questions."—J. F.

Answer—

There probably is little if any difference regarding the influence of a queen or drone on the offspring. However, bees of pure breeding would probably dominate the offspring if they are mated with those of mixed breeding.

The question cannot be answered as I would like to because there has been relatively little investigation into the matter of inheritance in honey bees.

Wilmot Newell, who was in Texas in 1914 showed that when Italians and Carniolans are mated that the yellow color of the Italian male mated with a Carniolan female or the reverse.

The size of brood-chambers has no influence in prolificacy of a queen. Prolificacy is an inherited characteristic and while a small

brood-chamber might prevent her from laying the maximum number of eggs, yet, it could not affect inherited tendencies.

B. F. KINDIG.

1. I have one colony of bees and don't know much about the nature of bees. How can I tell whether the bees have a queen? How long will the bee live without a queen? How do they act when they have not a queen?

2. Do you, in the fall, put in enough syrup to last them over winter, or can you put it in as they consume it?

3. About how many bees are there in a good colony? It seems to me my colony hasn't very many.—W. M.

Answer—

Before answering your questions, I want to urge you to get and read one of the several good bee books that are for sale. Such a book would be worth many times its cost to you.

1. The queenbee is about one-half longer than the rest of the bees in a hive. In most bee books there are pictures of the three kinds of bees in a hive—the queen, the workers and

the drones. When bees are queenless they are usually uneasy, restless, etc., when the hive is opened. When they have a queen and all is natural and well, there is a pleasant contented hum that is welcome music to the experienced beekeeper.

During the egg-laying season, when there is a queen present in a colony of bees, eggs and brood in all stages will be found, thus showing the presence of a queenbee even if you don't see her.

2. Bees should be fed in the early fall—say from September 15 to October 15, if they need feeding. They should be fed thus early so they can store the syrup in the brood-combs of the hive and seal it over before cold weather arrives. No, you can't feed bees any time, or daily, through the winter, as you can calves or other farm stock. They cluster for winter on and between the brood-combs and should not be disturbed, except as they decide to break their cluster for reasons best known to themselves. Each colony should have about 35 pounds of winter stores, either honey or sugar syrup, preferably honey.

3. A fair size colony of bees in the fall might well contain 20,000 bees and sometimes more. There are about 5,000 worker bees in a quart, so a gallon of bees would be about right for a fair colony to start the winter. The queen should be kept busy laying in early fall so that there may be assured a good supply of young bees for the following early spring, reared to take their places.

And I can not give any better advice to any would-be successful beekeeper than this: Get a good bee-book and read it—study it—until you get the first or foundation principles "by heart" as the saying goes.

GEO. W. YORK.

### "SUNNI HUNNI"

The California Honey Producers' Co-operative Exchange has been organized to unite the California beekeepers and to stabilize distribution and eliminate waste and to improve the grades of California Honey.

Before this selling organization was formed, the handling of Honey was a very unsatisfactory business with no stability in price, no organized source of supply, and a great lack of uniformity in pack and grades, to the extent that both the wholesalers and retailers did not have much encouragement to handle this commodity.

The new exchange has improved standards of quality in desirable and attractive packages under co-operative brands and also supplying the dealers with attractive window displays, striking display hangers suggesting the uses of California Honey and by national trade advertising.

The old way of sending Honey in sixty-pound cans wherein many flavors, colors and qualities were represented, is now gradually becoming obsolete just the same as it has with syrups, olives, pickles, rolled oats, crackers, etc. It goes without saying that packed in this manner, it is much more desirable and sanitary for the dealers to handle.

Under their "Sunni Hunni" brand they pack the first quality of White Orange and White Sage Honey and their Golden Blossom brand, they pack the finest table quality of light amber honey which is meeting with great favor with the trade throughout the country and is being handled by grocers who heretofore disliked handling honey in bulk.

### THE HONEY MARKET IN

#### BRIEF; DEMAND STILL LIGHT

**Los Angeles**—Practically no wire inquiry. Movement slow, market weak, prices generally lower. Supplies of white honey light, of dark honey heavy. Price ranges from 10 to 18 cents, Hawaiian down to 7 cents. Practically no sales being made, and unless demand increases shortly, still lower levels may be reached.

**Intermountain Section**—Light shipments being made, chiefly of extracted stock. Unofficially estimated that honey movement from this section for the months of October and November was less than 10 per cent what it was for same months a year previous.

**Boston**—Some sales of Porto Rico honey reported, but no movement of other extracted honey and very little of comb, which is holding firm.

**Chicago**—Market in extracted very dull and demand slow; most sales in small lots to bottlers and wholesale grocers. Market dull and demand light in extracted, though supplies are rather light. Liberal stocks of beeswax on hand, including a lot of foreign wax, prices on which are declining.

**Cincinnati**—Comb supplies moderate, extracted liberal. Practically no demand and few sales. After-holiday strengthening has not materialized, and conditions show little change.

**Cleveland**—Movement very light on all classes of honey. Dealers report supplies light to moderate.

**Denver**—Arrivals light, market weak, demand and movement light.

**Kansas City**—Supplies moderate, demand moderate, market dull. Comb-honey seems to be about steady, while extracted is slightly stronger.

**Minneapolis**—Market weaker, dealers trying to unload present stocks before buying more. Comb market steady; some dealers feel firm even at present prices.

**Philadelphia**—Practically no demand, very few sales in small lots.

**St. Louis**—Comb market weakening, with practically no sales made. Extracted supplies are liberal, with no demand. Some claim that cheap Porto Rico imported stock is having a depressing effect on domestic honeys.

**New York**—Supplies light, with practically no demand or movement. A few bakers, confectioners and bottlers are buying principally South American and West Indian stock account low prices of these goods. Buying continues to be done practically on hand to mouth basis.

**1920 U. S. HONEY PRODUCTION**

The average yield per colony in the United States in 1920 was 59 pounds, as compared with 50 pounds in 1919 and 42.2 pounds yearly average from 1913 to 1918. California led all other states, producing 15 per cent of the total honey produced in the United States, the average yield per colony in California being 93 pounds as compared with 52 pounds in 1918 and a yearly average of 62 pounds from 1913 to 1918. Texas ranked next to California, producing 7 per cent of the total honey produced in the United States, the average yield per colony being 70 pounds in 1920; 72 in 1919; and 31, yearly average, from 1913 to 1918. Iowa ranked third, producing 6 per cent of the total produced in the United States, the average yield of colony being 75 pounds in 1920, 97 pounds in 1919 and 52 pounds yearly average from 1913 to 1918.

**SUPPLY FIRM MAY EXPAND**

M. H. Hunt & Son, 510 N. Cedar St., Lansing, Mich., one of the oldest dealers in beekeepers' supplies in the country and the first

to start doing business in Michigan, have expansion plans under advisement which will mean a larger storage capacity for the N. Cedar St. plant.

The expansion will mean an addition to the present storage and shipping rooms and will be made in the spring if the business outlook warrants it. The concern, which located in Lansing 12 years ago because of the city's central location in the state and its shipping facilities, acquired land sufficient when it first settled its business here to make the expansions planned.

M. H. Hunt & Son is strictly a jobbing concern and manufactures nothing. It handles all kinds of beekeepers' supplies in addition to supplies for fruit growers and packers. The concern put out 1,000,000 berry boxes in this part of the country last season in addition to baskets of all sizes.

The concern is now assembling its 1921 catalog and it will soon be ready for the mails. For several years the concern has dealt in honey, the local business amounts to many tons annually. Its business in supplies now covers the state completely.—State Journal.

**TINS AND GLASS JARS**

Down in Cost—Order Now For Next Crop Packing:  
Note—Low Prices Subject to Chance at Any Date:

Following Tins F. O. B. Baltimore Factory	For N. Y. Shipment add 15 per cent extra:
2½ lb. Cans 2 doz. reshipping cases, per case net.....	\$ 1.45
2½ lb. Cans in 100 can crates, per crate net.....	6.50
2½ lb. Cans in 200 can crates, per crate net.....	11.00
2½ lb. Cans in 500 can crates, per crate net.....	24.50
5 lb. Pails with handles, 1 dozen reshipping cases, per case net.....	\$ 1.35
In crates of 100, per crate net.....	8.30
In crates of 200, per case net.....	16.25
10 lb. Pails with handles in ½ dozen cases, per case net.....	\$ 1.10
In crates of 50, per crate net.....	6.70
In crates of 100, per crate net.....	12.75
5 gal. tins used, good condition 2 to case, per case.....	\$ .50
5 gal. tins NEW 2 tins to wood case, per case.....	1.35

White Flint Glass, with gold lacquered wax-lined caps:

F. O. B. Wheeling, W. Va. factory or add 15 per cent for New York City Delivery:	
8 oz. honey capacity cylinder style, carton of 3 dozen.....	\$1.50
16 oz. Honey Capacity Table Jar style, carton of 2 dozen.....	1.40
Quart or 3 lb. Honey Capacity, Mason style, carton of 1 dozen.....	1.00

**HOFFMAN & HAUCK, INC.**

1331 Ocean ave.

Woodhaven, N. Y.

**BOYER'S "QUALITY-FIRST"*****Tin Honey and Syrup Containers***

Are the best and cheapest in the long run. Prompt shipments of all Standard sizes and styles.

**CAN MANUFACTURERS SINCE 1892. LARGE CAPACITY.**

If you cannot secure them from your usual Supply House, write us your needs.

**W. W. BOYER & CO., INC.**

2327-2359 Boston St.

**BALTIMORE**

**MARYLAND**

STORING HONEY FOR USE

Many people will put in a supply of honey for the first time this year for family use during the winter, either from their first production as beginners in beekeeping or from the apiary of some friend or neighbor. And many people are going to make a mistake in storing that honey unless they take the precaution to ask the beekeeper or experienced friends as to what they should do with it.

Honey, unless it is strained and sealed in tight jars, should not be stored in a cellar, basement, or cave. In fact, any damp place is injurious to comb-honey and will ruin your supply. The best place to keep comb-honey is in a dry and fairly warm place. If the air is at all damp in the place where the honey is stored, it will be as dangerous to the keeping qualities, for its warmth will not save it.

No better place, as a rule, could be found for the comb-honey than on a shelf in a cupboard or built-in cabinet right in the kitchen. The kitchen is generally the driest spot in the house and a temperature more suited to the honey, is usually maintained there.

Heat will not injure comb-honey. In the hive it is right out in the sun in the hottest summer weather. In fact, heat tends to harden comb honey and that is most desirable in keeping it. However, it is not necessary to have honey in a hot place and it is best to have it in a closed place rather than on an open shelf, as steam from cooking and washing dishes dampens it unless protected.

If You Want the Cheapest, Buy the Best

A. B. Marchant  
Jesup, Ga.

Breeder of Pure Italian Queens

Two and Three Frame Nuclei a Specialty

I offer for sale 2,500 two and three frame nuclei. These bees are bright three-band Italians and free from disease, on Hoffman frames, wired and combs are all from full sheets of foundation; most of these combs not over two years old. Orders booked now, with half cash with order, balance before shipping.

Prices with queens, 2 frame, \$5.50; three frame, \$6.50. If queens are not wanted deduct \$1.25 for each nuclei ordered.

I will also start mailing queens May 5th at the following prices: Untested, single, \$1.50; six for \$8, twelve for \$15.00. Tested, \$2.50 each. Select tested, \$3.50 each. I also have a choice lot of breeders at \$5.00 each. Special prices on large lots of queens.

Now is the time to place your orders, before the best dates for delivery are all taken.

Reference: Merchants & Farmers' Bank  
of Jesup, Ga.

QUEENS

Package Bees

QUEENS

ORDERS are coming in daily for 1921 shipping

My FREE circular gives prices, etc. in detail. Safe delivery guaranteed. We ship thousands of pounds of bees all over the U. S. A. and Canada. Our Fall flow is very favorable for Queen-rearing up to about Christmas so I can furnish you queens the balance of this year at the following prices.

	1	6	12	50	100
Untested Queens....	\$1.50	\$ 7.50	\$13.50	\$ 48.00	\$ 95.00
Select Untested.....	1.65	8.25	14.85	52.80	104.50
Tested Queen .....	2.50	13.50	27.00	110.00	
Select Tested .....	3.00	16.30			

NUECES COUNTY APIARIES

E. B. Ault, Prop.

Calallen

Texas

## CLASSIFIED DEPARTMENT

Advertisements under this heading will be inserted at the special rate of 10 cents per line per insertion, average eight words per line. Minimum charge, 50 cents per issue. Cash must accompany order, as amounts are too small to warrant bookkeeping.

### BEES AND QUEENS

**WANTED**—200 or less colonies of bees for spring delivery; any style hive. Remember 10c honey is in sight for 1921. A. W. SMITH, Birmingham, Mich.

**PACKAGE BEES AND QUEENS**—We will shake from over 1,000 colonies during the coming season; Golden's that are true to name. Also three-banders. Booking orders now; write for prices. Over 20 years a breeder. GARDEN CITY APIARIES, San Jose, Calif.

**SHE-SUITS-ME QUEEN BEES**—Prices for 1921: May 15 to June 15 inclusive \$2, ten or more \$1.75 each. After June 15, one to nine \$1.50 each, 10 to 24 \$1.40 each, 25 and up \$1.25 each. 3-band Italians. ALLEN LATHAM, Norwichtown, Conn.

**GOLDEN ITALIANS**—Two-pound package of Golden Italian bees \$4.75; 10 or more \$4.50 each. One untested queen \$1.50; 10 or more \$1.25 each. One tested queen \$2.50; 10 or more \$2.25 each. No disease of any kind. Safe delivery guaranteed. 20 per cent must accompany order. Circulars. J. E. SUTTON, Linden, Ala.

**BOOK YOUR ORDER** for finest Golden Italian Queens. It is worth hundreds of dollars for beekeepers to get them at these low prices: One, untested, \$3.00; tested, \$4.00. Guaranteed shipments start latter part May to October. No disease. Frank Skipala, Box 111, Woodbine, N. J.

**DAY-OLD QUEENS**—Disease-resistant Italians. Arrival guaranteed in U. S. and Canada. High quality, low price, satisfaction. Safe introduction described in circular. Order early. Prices, April 15 to Sept. 30: 1, 75c; 12, \$7.20; 100, \$60. JAMES McKEE, Riverside, Calif.

**FINEST ITALIAN QUEENS**—Send for booklet and price list. JAY SMITH, R. D. No. 3, Vincennes, Ind.

**FOSTER'S SELECT THREE BANDED ITALIAN QUEENS** are reared from the best mothers and mated to choice drones. Select untested, one \$2.00, six \$9.00, twelve, \$16.80. After June the first, one, \$1.50; six, \$3.00; twelve, \$14.00; tested, \$3.00 each. Write for prices per hundred. Descriptive circulars free. HARDIN S. FOSTER, Columbia, Tennessee.

**HARDY ITALIAN QUEENS**, one \$1.00; ten, \$3.00. W. G. LAUVER, R. No. 3, Middleton, Pa.

**QUEENS, BEES BY THE POUND**—Booking orders now. Guarantee shipment to be made on time. FREE circular explains. NUECES COUNTY APIARIES, Calallen, Texas. E. B. Ault, Prop.

### HONEY FOR SALE

**FOR SALE**—Pure extracted white clover and light amber honey, in new 60-lb. cans at 25c per lb. F. O. B. shipping point, also 10 lb. pails at 27c lb., 20 oz. jars 45c each. GEO. A. BRILL, Elk Mound, Wis.

**FINE QUALITY** of table honey at 25c per pound in 60-lb. cans, two in case; 27c per pound in five lb. pails packed 12 in a crate or 50 to a barrel. Sample 10c. O. H. SCHMIDT, Route 5, Bay City, Mich.

**HONEY FOR SALE**—Immediate N. Y. shipments clover or sage qualities: White grade at 18c lb. or light amber grades at 16c per lb. Two 60-lb. cans in case. Light amber (50-gal. bbls.) West Indian grade, 90c per gallon. All f. o. b. New York City. HOFFMAN & HAUCK, INC., Woodhaven, N. Y.

**FOR SALE**—Buckwheat extracted honey in 60 lb. cans and 170 lb. kegs in quantity up to 15,000 lbs. Write for prices. E. L. LANE, Trumansburg, N. Y.

**FOR SALE**—Extracted honey in 5-pound pails, pound jars and 60-pound cans. 35 eight-frame hives, 79 eight-frame comb supers with holders and fences, 50 ten-frame comb-honey supers. W. S. WIGGINS, Muir, Mich.

### HONEY WANTED

**QUICK CASH** for extracted and comb. Send sample, describe and say price. BRUNER, 3880 No. Kostner Ave., Chicago.

### MISCELLANEOUS

**FOR SALE**—3000 comb-honey supers for 4x5 section, nailed and painted; run in clean yards and are practically as good as new. Also 4000 Airline shipping cases, also nailed; corrugated paper for same. Also 40,000 grooved sections with full sheets of foundation for same. This is all A1 stuff, and price away down. L. A. Coblentz, Rigby, Idaho.

**FOR SALE**—Foundation-making outfits cheap. Simple easy method. Hand or power. Grand Haven Pattern Works, Grand Haven, Mich. D-J-F

**POSITION WANTED** by experienced apiarist; Texas, California or Florida preferred. Now occupied for five years on same place. Like manager on bee, fruit, chicken and general farming. First class references from the best beekeepers in Minnesota. Stephen Mloch, Excelsior, Minn. N

**WANTED BY A SINGLE MAN**—Partner in the bee business, or will sell half interest in two fully equipped apiaries. Excellent chance to learn the business. B. HOWARD, Mt. Clemens, Mich.

**FOR SALE**—10-fr. hive bodies in flat, below factory prices. C. H. HODGKIN, Rochester, Ohio.

**FOR SALE**—Root foundation mill, 2½x6 in. hexagon thin surplus, excellent condition, price \$40.00. Also nearly new Newhouse bear trap No. 5, \$8.00. EDWARD R. WILSON, Route 1, Pipersville, Pa.

### WAX RENDERING

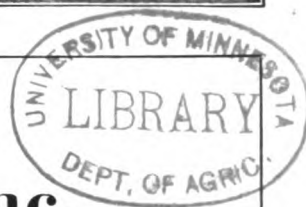
**OUR STEAM** wax presses render the last drop of wax from Old Combs and Cappings. We charge 5c a pound for the wax rendered and buy your wax at best price. Write for shipping tags and send your Old Combs to us. THE FRED W. MUTH CO., Pearl and Walnut, Cincinnati, Ohio.





# *The* **DOMESTIC BEEKEEPER**

SUCCESSOR TO  
*The Bee Keepers' Review*



## **The Duffy-Diehl Inc.**

17-19 S. Chester St., Pasadena, California, U. S. A.

Can supply you immediately with any number of

### **THE MAC DONALD ALUMINUM HONEY-COMB**

Hoffman Frames complete, f. o. b. Pasadena.....	60c
Langstroth Frames complete, f. o. b. Pasadena.....	60c
Jumbo Frames, f. o. b. Pasadena.....	70c
Shallow Frames complete, f. o. b. Pasadena.....	50c
The New Brood Rearing Comb, f. o. b. Pasadena.....	55c

*March 1921*

15 Cents a Copy

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## BEEES FOR SALE

### GOLDEN AND 3-BANDED ITALIAN BEEES

(The kind that fill from two to six supers)

In eight and ten frame hives at \$12.00 and \$15.00 each. Bees shipped by express in spring.

#### Queens After May 1st

Orders booked now with part payment.

Price of Queens: \$2.00 each; \$11.00 for 6; \$45.00 for 25

Also have comb-honey for sale at  
\$3.25 per case of 12 boxes

Extracted Honey \$2.50 for 10-lb. Pail

S. C. R. I. Ckls. at \$3.00, \$4.00, \$5.00 each

Eggs for hatching (280 egg Trapnested Strain) \$2.50 per 15, \$12.00 per 100.

Reference: "National Citizens' Bank"

**Miss Lulu Goodwin**

Lock Box No. 294

MANKATO, MINN.

"Griggs saves you freight"

## TOLEDO

How about supplies for 1921.

Send us a list of Goods needed and we will quote prices on same.

## BEEESWAX

Wanted in exchange for supplies or cash.

Send your name for new catalog.

**Griggs Bros. Co.**

Toledo, Ohio

Dept. 31

"Griggs saves you freight"

**Here's your chance to save many dollars from our  
Bargain List, part of which is given**

## *Send For Complete List*

Everything new and fully guaranteed—Prices f. o. b. Newark, New York

12 and 16 oz. tall, round glass jars with cardboard lined caps in	
2 doz. cardboard shipping cases, per gross.....	\$7.15
500-8 and 10 Frame Excelsior covers, each.....	39c
300-8 Frame Reversible Cypress Bottom-boards, each.....	65c
4000 all wood frames, Langstroth size, each.....	4½c
1000 Unspaced all wood Fr. Reg. top bar, each.....	5½c
2500 Shallow extracting frames, each.....	5c
500 Shallow Extracting Supers with Fr., each.....	\$1.00

A complete list and samples mailed on request.

Let us render your old combs. We guarantee to extract the last drop of wax. Send for price-list and shipping tags.

**Address The Deroy Taylor Co., Newark, New York**

## Honey Producers--- Take Notice

Do you realize it is only a short time until your bees will be taken out of winter quarters? Have you thought about supplies for next season? Do not wait until swarming time for that means dollars out of your pocket. Order your supplies NOW.

We manufacture and carry in stock a complete line of Bee Supplies ready for prompt shipment. Send us a list of the supplies you wish to purchase and we will be pleased to quote you our prices. Our 1921 descriptive catalogue and price list now ready for mailing. Send us your name and address and we will mail you our catalogue.

**August Lotz Company**  
Boyd, Wisconsin

## Early Spring--- Buy Now!

INDICATIONS point to an early spring. You'll want bee supplies on hand when the season starts.

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Muth's Ideal Veil \$1.50



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SEND US A SAMPLE OF YOUR HONEY and name your most attractive price delivered to Cincinnati. We pay you the day shipment is received.

WAX—OLD COMBS. We pay you the highest market price for rendered wax less 5c per pound, rendering charges. Our rendering process saves the last drop of wax for you. Write for shipping tags.

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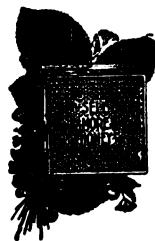
## SUNNY SOUTH APIARIES

E. G. LeStourgeon, Manager



# The DOMESTIC BEEKEEPER

SUCCESSOR TO  
*The Bee Keepers' Review*



PUBLISHED MONTHLY

\$1.50 PER YEAR

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NO. 3

## *The Beekeeping World's Debt to America So Wonderful*

Arthur C. Miller-Providence, R. I.

We Americans are rattling good beekeepers, at least we would be mighty good at rattling if we were not so puffed up with hot air. Of course, you don't like that, truth is seldom palatable. If it is in praise, it is too mild, and if in criticism it is sure to be considered overdrawn. If you don't like it you don't have to read it. Stop right here and run work your tire pump and inflate yourself some more.

Ever count up the number of wonderful inventions in bee-culture due to the cleverness of Americans? How many did you say? You are all wrong. Here are just THREE.

The Bee Smoker.

The Bee Escape.

The Hole.

and the greatest of these is the Hole. It is so convenient for the admission of cold air and the expulsion of "Hot Air."

Movable combs in frames was the invention of a Swiss, the Extractor of an Austrian, Comb Foundation of a German, Baby Nuclei also of a German, all the early and revolutionary knowledge of bee life and behavior, of a Swiss, a Frenchman and a Dutchman, and the afore mentioned three important things left for us.

How about hives, excluders, etc., etc.? All merely development or adaptations of what others had done. In hives we lead the world. Excluders were merely the happy adaptation of a bean sieve to the purpose. The Smoker was Quimby's gift, the Porters gave us the Escape and Langstroth gave us the Hole, (Bee Space) the thing which made movable combs and all modern hive appliances practical.

That Hole not only kept hive things apart, but filled us so thoroughly with hot air that we have not yet got a good perspective of our-

selves—and I wonder if we ever will.

Yes, we are great commercial beekeepers, thanks to Quimby's initiative, but we are darned poor merchants. Everything was lovely when the price of honey was soaring during the war, but now that it is going back to the old levels we are hollering for Uncle Sam to help us with a tariff, saying that if he does not our industry is ruined.

Now Uncle is a pretty generous old fellow, but he wants to know a few facts before he helps his boys. He asks how much honey we produce, how much it costs us to produce it, how much we import and a few simple things like that which any other big going business can tell at once. But we can't, nor even make a plausible guess. Before we ask for help we should know if we really need it and why and how much.

Personally, I believe hard knocks and keen competition is better for us and I maintain that our hollering for help when we do not even know whether we need it or not, is good proof that we have scarcely touched our part of the business.

You talk of the competition of cheap labor from foreign countries. What do you know about it? How much honey per colony does that foreigner produce? What does his labor cost him? What is his investment?

We can, and many of us do produce the very finest quality of honey for less money than any other people on earth. Of course, if they send in honey here at a price we know is less than cost then we want to and should keep it out.

Ten cent honey is a very profitable honey to produce, and if we will only get rid of our self conceit and take a leaf from the life of our

English cousins and learn a little of real modern merchandising and get down to brass tacks in selling, we will stop cry-babbling.

I am well aware that this will not be popular and that many of you will not agree with it. Truth seldom is popular.

If I wanted to be popular I would tell you what bright, smart children you are, how you have the finest and most costly equipment on earth—even if it is not standardized—that you have the greatest honey country ever—even if it has lots of bald spots and others black with honey dew—that you produce the biggest yields per colony with the most labor and trouble and manipulation, and at the most expense—even if you cannot tell the expense nor even guess within a ten acre lot of what it costs you per pound to produce. Oh, yes! you are wonderful merchants.

The first essential of successful merchandising is wise buying and if you don't know the cost of your product how do you know you have bought (produced) wisely?

How are you going to find out? Oh, you poor fish. For gracious sakes get out of the business and make room for some live ones. Get somebody to tell you how much it costs you to handle a colony for a year, and you can readily figure costs at any time.

When you get some idler to answer that question for you, it will be time for you to ask some one to listen to you.

#### A LETTER AND ITS ANSWER;

##### TARIFF QUESTION DISCUSSED Union Center, Wis., Jan. 22, 1921

Geo. W. Williams, page 11, January issue: Permit me to say that your idea with reference to the honey and tariff situation is perfectly O. K. and unless the beekeepers of the United States get protection from all foreign countries on both honey and wax, the industry in this country is doomed, and to my certain knowledge, some now are going out of the business until there is a tariff put upon the foreign products. You are also quite right as to being the proper people to bring this about. Yet I fear that you are tying to the wrong parties, as they are too much interested in the importations and are making a barrel of money out of it, and to the detriment of the beekeepers of the United States, and the very people who have made them what they are today and regardless of the fact that it has been radically wrong. But it's the same, I guess, the world over. It's the almighty dollar, no matter how, but the point is, Get it.

ELIAS FOX.

Friend Fox: Your letter was referred to me, and I thank you for your endorsement. The editor's comment covered the ground pretty well, but there is a whole lot to this matter.

There are a few interests that would be hurt

by a tariff on imported wax and honey, but the business would doubtless be much benefited by limiting the importation of low-priced and poor quality of honey from tropical countries. Our neighbors on the north have just as good honey as ours and ought to have as good prices.

It is the cheap stuff that is brought in from tropical countries and sold by the gallon at low prices that hurts the business. Only recently a lot was shipped into Minnesota for 35 cents per gallon, I believe or about 3½ cents per pound (such honey is lighter than our good honey), and it cost the beekeepers of the north-west thousands of dollars. For the buyers used the quotations to beat down the price of the local producers' honey several cents on the pound.

Not only the price was detrimental, but its poor quality reacted against local honey, for some people bought it, as it was labeled "Pure Honey", and so it was; but such stuff! So these people bought no more "Pure Honey", for to them "honey was honey."

And again, in common with most tropical and sub-tropical honey, it was alive with foul brood, and was probably the source of much local disease.

Friend Fox, this is one of the few big vital policies before beekeepers today, and one that interests every bee man who sells honey, or wishes immunity from imported disease. The present congress cannot give us any relief, but the next one can, and will, if we ask it.

In view of the present condition of the industry and its potentialities, a tariff to protect and encourage it is as necessary as in any other minor industry. We can get it if we want it badly enough, and if we all want it.

GEO. W. WILLIAMS, Redkey, Ind.

#### "BEEKEEPING IN THE SOUTH"

"Beekeeping in the South" is the title of a new and exceptionally valuable treatise by Kenneth Hawkins, published by the American Bee Journal, a copy of which was recently presented to us by the publishers. The book is profusely illustrated, and the contents range from a chapter on "What a Beginner Must Learn" to "Honey Plants of the South." In his preface the author says: "The information given in this book is intended to clear the impressions of many that the south is altogether an undeveloped region so far as beekeeping is concerned and that one has only to move to that magic region, 'Dixie', to escape the problems common to beekeepers living in the north. It is also intended as a defense of the southern beekeeper, of whose methods and opportunities so much misinformation has been spread." We commend the volume to every beekeeper, and it should find place on the library tables of hundreds of our readers.



APIARY OF LEVI I. GREENFIELD, COLLING, MICHIGAN

## Gold Diggers

*By Peggy Poe, Des Moines, Iowa*

Nature must have been in a very generous mood when she created the flowers, and her generosity must have had man in mind when she filled the woods and the fields with the charm of the buzz of bees, whose object in life was to make fertile the plants and flowers and at the same time store away the sweetness of the blossoms that man might share the nectar of the gods—sweetness that might be taken without the worry and endless struggle with labor.

That these same little workers might in reality be gold diggers became apparent when C. C. Taylor bought a farm in a very prosperous part of Iowa, taking in the usual equipment, implements, etc., left by a discouraged past owner. Taylor found among the miscellaneous assortment of things he had bought, a few swarms of bees in very poor hives. Now Taylor had no ideas about bees. They looked to him far worse than the oft-heralded white elephant. Taylor sought the county agent to see if he could find some one to take the bees off his farm. Of course Taylor was acquainted with honey when spread on hot buttered biscuit, but honey in the making was harassing him like a bee in a bonnet, and he wanted help. Right there good fortune in the person of that agent took Taylor in hand, and converted him to bees.

Taylor had in mind the culture of corn, but he was at last persuaded to keep his bees. Now the raising of corn had its charm, but Taylor divided some of his thoughts with the caring for those bees. He found them mysterious, fascinating, active little people who made and were ruled by laws of their own.

He found that they could do many things that his many-times-more powerful brain could not begin to do. Taylor became interested. He found that there were many good pamphlets on bee-culture. He found that, like with hogs and cattle, it was possible to raise the vigor of bees. He secured good queens and put the swarms into modern hives. This he did and then he let the bees do the rest.

They worked day in and day out. Labor strikes hindered other laborers, farm hands demanded more pay and shorter hours. Taylor raised his corn by sweat and worry.

Then it came time to harvest the work of his bees. After the harvest was weighed there was 20,000 pounds of the golden fluid. Taylor sold it at 25 cents per pound. \$5,000.00. His white elephant had turned out to be a gold mine. He had harvested the reward without any sweat of brow or aggravation of labor unions. Just a measure of liquid sunshine and goodness turned into cash by countless busy little workers who asked nothing in return but to be let alone.

E. S. Frost, apiarist, living near St. Louis, Mich., marketed a unique commodity in Lansing recently when he unloaded 584 pounds of beeswax at the docks of M. H. Hunt & Company. Frost received for the by-product of 200 colonies of bees a check for \$186.88. He will deliver a half ton more of the wax to the M. H. Hunt & Son's warehouses next week. While beeswax has declined some in price this season, yet the price paid is still high enough, it is said, to make a considerable showing for the professional beekeeper.—State Journal.

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SUCCESSOR TO  
The Bee Keepers' Review

LANSING MICHIGAN  
ONE DOLLAR AND FIFTY CENTS  
PER YEAR

PUBLISHED MONTHLY

E. A. LITTLE, Lansing, Michigan  
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ARTHUR RATTRAY, Almont, Michigan  
Associate

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ADVERTISING RATES—Advertising rates will be sent on request.

We believe in a square deal for everybody interested in beekeeping and honey-producing. We believe in a community of interests—those of the manufacturer, the jobber, the inspectors and instructors, the beekeeper. Provided there is cooperation on the part of every interest, the industry may take high rank in the nation's activities. Without cooperation there will be no progress.

## THE LEAGUE AND THE TARIFF

Long before the majority of the beekeepers even knew that a change in tariff was contemplated, the American Honey Producers' League officers were at work on this subject. It requires a great deal more than just asking your senator to put honey on the list to get the desired result. Months before these revisions even become bills, committees must work out all the details and it is to these committees that the League went. The League committee is now engaged in securing the data for the congressional committee. While the League will have representatives at the meeting of the Southern Tariff Congress it is hardly expected any change will be made in the emergency tariff bill. There is, however, every assurance that bee products will be included in the regular bill which will be taken up by congress in early summer. When that bill comes up for passage let every beekeeper write their representatives and senators. The league committee will give information as to the time of the hearing of the bill through the various bee papers.

## ARE YOU READY?

Of course, a whole lot of our readers are ready for the spring season, with its varied activities connected with beekeeping and with other interests about the farm or home. But it is certain also that many have been inclined to procrastinate—to put off until some other day the things which should be done now. Sure and we're all guilty of this habit, or lack of habit, the editor included.

This winter has been abnormally warm in every section of the country, even Canada with its reputation (not founded on facts so it is said) for bleakness and severity of weather during the winter months, reporting much pleasant weather. Not being a weather prophet, we're not risking any reputation by predicting that spring will be with us earlier than usual. Granting that is so, are you ready?

There's a heap o' things to do. You will want everything spick and span, hives in good repair, extra supers ready to be placed in service, probably some new equipment that you've wanted a long time. Order it now. Order the new queens now, too, if you wish to be sure of getting them when you want them. A letter from a prominent queen breeder just the other day said the orders have come in almost too fast to handle, and that he hoped he wouldn't have to return any of the deposits that are being sent; his condition is duplicated by many other queen breeders.

You might also turn in that wax which has been laying around for so many months. While the price isn't anything very dazzling, you'll get some money out of it, and who can't use a little of this "greatest of all evils" at this season of the year? A bee man last week was handed a check for \$186 for one load of wax by a Michigan dealer. Of course he is one of the so-called "large" beekeepers.

One other little matter: You'll probably need some new labels this year, some letter-heads and other printed matter. We happen to know that about now the printers are in better shape to handle the ordinary run of job work than they will be later, and there's a chance they will be reasonable as to prices. Make 'em buy a 10-pound pail of honey, anyway, before you pay for the work.

And be sure your subscription to The Domestic Beekeeper is paid in advance. This last admonition is one of the most important of all the suggestions, because we've some big things in mind for our readers in the busy months to come.

The United States last year exported 1,539,725 pounds of honey, the United Kingdom getting the biggest slice, with the Netherlands second.



## Wintering in the South

*By J. E. Sutton, Linden, Ala.*

One can hardly read a northern bee paper without a constant reminder of the wintering problem. How fortunate we southern bee folks are. One word settles or works out our winter problem. **Stores—Honey.** That is all our problem. You talk of putting bees "down cellar" in fall and worry all winter about temperature, and taking them out in spring. No man, by himself, without a block and tackle can put one of my hives "down cellar" in the fall. Ten frames broad, honey and pollen in bottom story, and nine fat frames of honey in the top story. Then not one house in every two hundred here has a cellar, and the few cellars you find are not big enough to whip a cat in—to say nothing of putting 100 to 200 beehives in.

There are several other things that are preached and practiced up there, and some of it filters down here and a deluded beekeeper thinks it is "Orthodox" and he must do it, for some big beekeeper from Ohio or Michigan says it is so, and we must do it. One of these uppermost in mind is "Always face the hive south or southwest. A north or eastern exposure is bad." Now the above is rank heresy down here—never select a south or southwest hillside. But if you have to accept such, face your hives north or northwest—better put them on top of a hill or north side is better, and much better. And for pity's sake don't put your hive on the south side of a building or board fence. "Why?" I hear you squall. Listen! My bees go into winter quarters with two 10-frame hive bodies chock full of stores.

A hive facing south, the entrance and front of the hive will be warmed up and bees will fly from six to ten days every month. While with a northern entrance, there is a shade and the winds have cooled down the entrance so that the bees stay indoors in the cluster and do not eat up their stores. If a bee flies he will eat, and if she eats much during winter the stores are all gone by spring. In the same apiary the hives facing north will have hardly a bee flying, while those facing south will have from eight to a dozen bees on the alighting-board with loads of pollen. Raising bees' brood from Christmas right on, and no honey. Nothing but pollen coming in, and if February has two weeks cold, rainy weather, the stores give out and the bees carry out half grown brood. While in the northern exposure hives they cluster until the last of January, when maple and elm supply them with pollen and the stores are hardly touched. By March 20 the hives facing north will have twice the brood and will have to divide stores with their south-

ern sisters. This idea is more than ten years old with me and is more forcibly exemplified each year. I shall not have anything to say anent a northern problem; you work them out. But as your valuable paper has, or should have a large southern circulation, you must let a southern beekeeper tell of their problems.

My bees today, Feb. 16, have brood in six to ten frames and early flowers are blooming profusely. Maples and elm are giving up their pollen. By the way, there is a cottonseed oil mill here and my bees just go right down and get a load of cottonseed meal and haul it home, saying nothing to nobody about it.

In Seasonable Notes by Mr. Sanders everything is O. K. but that arrangement with his wife. He would have to fix up the honey himself and then only get the wholesale price for himself. I fix up the honey myself and all the honey my wife sells that is 100 per cent hers, and if she collects for any little bit that I sell, why, why, she just smiles when telling me and that is the end of it. I have never forgotten what I told the minister.

### MUST BE CLOSE OBSERVER

The question is often asked, who can keep bees? And is often answered to the effect that anyone can that wants to. This is all right to the extent that there are hundreds and thousands of people in this country keeping bees, but how many of these people are honey producers? Do not misunderstand me and think that I mean one has to be a born beekeeper to make a successful honey producer, for I do not believe that; but I do believe that not everyone can make a successful honey producer, any more than everyone can make a successful lawyer or doctor.

To make a successful beekeeper, one must be a close observer, and be willing to read and study the habits of the honeybee, and to give his bees the proper care at all times. He must be always on the lookout for unusual things to happen, as they are sure to happen if one keeps very many colonies. He must study the natural condition of a normal colony so that he can easily tell when a colony is not in normal condition and will know what to do to right the wrong.

I know of a man who calls himself a beekeeper, since he owns three colonies of Italian bees. One of the colonies swarmed late last season and did not gather enough honey to go through the winter. Our county agent, who is a beekeeper, told the man to feed his late swarm or they would starve in the winter, and the man said that he would, but he did not and,

of course, the bees are dead. Now, if some young enthusiastic beginner could buy this man's bees and start right, he would become a honey producer. But if this man keeps the bees he will never become a honey producer, and in a very short time he will be out of the business. Our country needs more honey producers, but it does not need any more so-called beekeepers like this man.

Honey production is not easy; it takes head work as well as labor to make a success of honey production, so if anyone is going into the beekeeping business expecting to get rich quick and not do much work he will be disappointed. But if bees are given the proper care there is good money in beekeeping.

EUGENE HOLLOWAY,  
Oklahoma.

### HE SAYS WE'RE DOING BETTER

Dear Sirs:—I think I owe you thanks for last copy. Quite an improvement, and hope you will keep on. I sent in a dollar for Martin Merrow last year and told him it was all right. I have not seen him since and think I am lucky, as it has fallen away back.

I will tell you how I sold honey, comb and extracted. I peddled, shipped by mail and parcel post, and put it in the country stores. They would not buy but I left it there. I made the price and gave them 10 per cent, and it sold. But be sure and have it kept in sight. I told the traders where I wanted it set. One went so far as to place it on the candy showcase, in cartons and glass jars, and it sold.

Keep on improving and I may come back.  
L. H. FLETCHER, East Hiram, Maine.

## A Successful Experiment With Package Bees

F. M. Baldwin, Mt. Vernon, Ga.

A year ago, in the spring of 1920, I suggested to Carl L. Wilson of Marion, Ind., that we try an experiment with package bees and see for our own satisfaction what would come of it. He was willing and we agreed that I should send several 3-lb. packages of black bees with black queens and that he would furnish the hives and care for them. The bees were to remain my property and he was to have two-thirds of the crop for his work with them. Whether that was an equitable arrangement or not we did not know, but we were more interested in the question of what the bees would do with good care than we were in the financial outcome and concluded that we would each of us risk it at that.

The bees left me the 7th and 8th of May by express, two packages one day and one the next. They reached Jonesboro, Grant county, Ind., where the test was to be made together on the 10th and were at once run into combs and full sheets of foundation. They were there ahead of the white clover flow but found enough dandelion and black locust to build them up ready for the clover when it came in June. The season was an unusually good one and that will in part account for the success of the test; for it was a very successful one. The three colonies gathered 243 lbs. of extracted honey and enough besides to winter them. My third was 81 lbs. As Mr. Wilson was retailing at 40c a pound, his customers largely coming to his house for what they were buying, he offered me 30 cents for mine and I got his check for \$24.30. He then offered me \$20 for the bees and as I did not care

to have them shipped back to Georgia, I agreed to that also and my net proceeds were \$44.30 for the nine pounds of bees and three black queens. We are both well pleased with our attempt to find out what there is in the shipment of bees from the south to the north. And the story is here told for the encouragement of those who may be thinking of trying it.

I wonder if while I am at the typewriter I dare tell about what we are experiencing this spring in southeast Georgia. It is an exceptional season even for this far south. This is the beginning of the second week in February and the rush is on among the bees. Yesterday at noon and for several days previous the air was full of bees and the sound was almost like swarming. Nectar is rolling in and we can open the hives with impunity. You can't get a robber to pay any attention to exposed honey. Jan. 3 was the first day on which I saw pollen coming in, three days earlier than in 1919 and 17 days ahead of last January. Then the pollen began to come in on the 20th and maple which yielded it remained in bloom until March 13, about seven weeks, with an average of two good days per week. This year the average has been a little better than four days per week of good working weather and the bees have not failed to do full justice to their opportunity. Everything is humming with our pets and the hives are filling up with brood. I am afraid that your readers in the north will think that I am telling a fish story. But these are the words of

truth and soberness.

J. J. Wilder, the southern bee-king, has more than 150 large yards scattered over many counties of Georgia and Florida. His knowledge therefore of conditions is not second-hand, but drawn from his own extensive holdings. He writes me that the season is favorable but that the bees are in poor condition. That seems hard to believe for it is so contrary to our condition in this section. We are not 50 miles from several of his yards and all over this county the condition is extra good. Carl L. Wilson, whom I mentioned above, has settled at Mt. Vernon to engage in apiculture in the south, and W. E. Buckner of Dickson, Tenn., arrived here Christmas eve. to do the same thing. They have been traveling over the county buying bees in box hives and moving them to locations that they have picked out for their future operations. They have bought many hives and examined many others where the owners were unwilling to sell. Always they have found the hives heavy with stores and the bees strong in numbers. I have sometimes gone with them as I could get away from my regular work and have purchased 25 "gums". These have been brought home and a few of them transferred. Each of them has shown up strong in bees with brood rearing well advanced. The cells around the brood nest are full of pollen and the hives are crowded to the outer edges with stores. They could hardly be in better shape at this time of the year.

Last fall we had a big flow from velvet beans and Mexican clover. The hives filled up full and the amount of stores where the extracting was not done very closely was extra large. This spring some of the brood-nests are almost honey-bound. Swarming will come very early unless we have a cold spell. The last of March is our usual time for new colonies to be left in the hives by the outgoing of the old. The first week in April generally finds this colonization in full swing. The outlook this season is swarming by the last week of February. We are fully a month ahead of last year. As we do not care for that, we hope that a wind from your north-land will sweep down on us and set things back a bit.

Alder and maple bloom at about the same time in our locality. Both yield pollen freely and maple gives nectar also in abundance. Alder is about done, but maple looks like it would do us good for at least ten days more. From the 3rd of January to the 20th of February is a long while for any one plant to bloom, especially when it is the first flower of the spring. But that is about what maple does annually for us. Last year we had it in bloom 50 days and this time it promises to be with us in good condition for at least 48 days. The maples do not all burst into flower at

once. Part of the tree will open up and then more of it after a few days, and later more of it. Thus any one tree is good for several weeks. But the value of the yield is increased by the fact that some trees are very slow to begin blooming and hold back until after the first have ceased to flower. It is to this peculiarity that we owe our long maple flow and it is accordingly very valuable. By the time it is at an end the hives are full of bees and brood. One could not ask a more desirable plant in this section. Coming early and staying with us until fruit-bloom, it cuts out the danger of spring-dwindling. It makes this a wonderful region for building up colonies at little expense. Our fall flow runs into November and some pollen is gathered in December. January brings maple and alder. The thermometer rarely drops much below freezing point. Little cold, short winters and the fall and spring flow separated by not as much as 60 days are what give us our great advantage over Indiana and even Tennessee and north Georgia. It has not been my thought to boast of our section, only to tell our story as news that may interest the fraternity. The conditions are so different from what I used to experience in Illinois, Indiana and Kentucky that I often wonder if they are really true or only a freak that will not last. But four springs in this county and seven in Florida have about convinced me that the thing will last. Therefore I am making bold to tell about it.

#### SHORT COURSES FOR BEE-KEEPERS IN WESTERN UNIVERSITY

During January and February there were eight schools or short courses for beekeepers in Western Washington. They were held at Wishkah, Elma, Olympia, Puyallup, Seattle, Shelton, Everett, and Bellingham. There was a total of nearly 1,000 present at all the short courses, among which were a number of women. The Seattle school was best attended, there being nearly 400 people who were interested enough to remain for five day sessions and two night sessions. And the interest was intense throughout the entire eight short courses.

The principal instructors were Dr. A. L. Melander, of the Washington State College at Pullman; W. L. Cox, of Elma, the bee inspector for Gray's Harbor county; Fred Mandory of Tenio, the bee inspector of Thurston county; and George W. York, of Spokane, for 20 years editor of the American Bee Journal in Chicago, Ill., and connected with beekeeping for over 35 years.

The principal topics considered were "Beginning With Bees" (illustrated); "Transferring Bees to Modern Hives"; "Beekeeping Equipment"; "Securing Comb and Extracted



CONVENTION OF MICHIGAN STATE BEEKEEPERS' ASSOCIATION, PICTURE TAKEN AT

Honey"; "Fall and Spring Handling of Bees"; "Finding a Location for Commercial Beekeeping"; "Bee-Diseases and Their Treatment" (illustrated); and "Visits Among American and Foreign Beekeepers and Apiaries" (illustrated).

After the presentation of each topic questions were asked and answered, and a general discussion ensued. It was surprising to note the deep interest manifested by all in attendance. Beekeeping and the production of honey are growing in Washington, and if the present legislature will appropriate the \$12,000 desired by the beekeepers to carry on the important work of contagious bee-disease inspection and general education along apiarian lines for the next two years, there is no reason why the business of beekeeping and honey production should not be doubled.

There are two unusually interesting phases connected with beekeeping. One is that if it were not for the bees that daily gather the nectar in the flowers, it would all go to waste; so the bees are wonderful conservators of a valuable natural resource. Secondly, the value of bees in the pollination of fruit and other blossoms is far greater than is the value of the honey they produce. It has been shown by government investigation that honey bees increase the annual fruit crop at least 7 per cent over what it would be were it not for the work of the bees in causing a more perfect pollination of the blossoms.

Surely, when honeybees have so much to their credit, their culture should be encouraged, and every effort made to extend the good work that they and their keepers are doing. The state of Washington would be the richer thereby, and its people in general more healthy because of the consumption of the excellent human food (honey) that the bees produce. There is no good reason why Washington should not lead all the other states along beekeeping and honey production lines. If the legislature will make the small appropriation

desired by the beekeepers, it will prove to be the best invested money of any that it will vote for use within the next two years.—George W. York, Spokane, Wash.

#### COULDN'T COUNT HIS BEES

WASHINGTON, D. C.—The commissioner of internal revenue may suspect extremely rich persons of holding back some of the income taxes due Uncle Sam, but he is quite sure that when a certain Missouri farmer makes his return there will be no need for an investigation.

Officials of the income tax division received a letter from this tiller of the soil, in which he enclosed an inventory of every piece of property on his farm, including his house cider press and an old dilapidated churn. He was pretty certain that he had not missed a single article that might be taxable.

"I have put down everything on this list," wrote the farmer, "except the number of bees in my hives. Only God Almighty and the angels in heaven have counted the bees, and they haven't communicated with me. Figure out my income tax and I will send you a check immediately."

#### STUDIES AMERICAN METHODS

A Palestine beekeeper, by the name of Alexander Livshitz of Jaffa, president of the Palestine Beekeepers' Association, arrived recently for the purpose of studying American methods of beekeeping. He expects to spend four months in California. Eight years ago there were 100 colonies of bees in Palestine, which Mr. Livshitz has succeeded in increasing to 4,000. He expects that within a few years after his return to Palestine his association will have 20,000 colonies of bees.

It is anticipated that Palestine will soon be the Jewish national homeland once more, and it is intended that milk and honey shall flow again as they did in the ancient Land of Canaan.



MICHIGAN AGRICULTURAL COLLEGE, EAST LANSING

## Field Notes From the Middle West

*By J. W. Stine, Burlington, Iowa*

A meeting of unusual interest was held at Remey Hall, Burlington, Iowa, on Wednesday afternoon, Feb. 9, 1921. It was held in connection with the Farm Products Show. There were over 30 beekeepers listened to the addresses given. N. I. Lyle, special field agent in beekeeping, gave an interesting talk on the three fundamentals in successful beekeeping. A good strain of bees raising the queens from the colonies that do the best work and are the most disease resistant being very important; the proper equipment in the way of hives, extractor, honey house and so forth; and last but not least the proper handling of bees, giving them the proper attention when needed. abundant super room, also care in keeping down the swarming impulses. As a general rule the queen should not be allowed to remain with the colony more than two years. These and many other useful suggestions were given.

S. W. Snyder of Center Point, Iowa, the first secretary of our Iowa Beekeepers' Association, gave an instructive talk on organization. "A county organization and the close cooperation of experienced beekeepers with beginners in the industry are necessary for the protection of both the small and large bee-yards," he said. If a man with a few colonies is allowed to handle his bees carelessly without gaining a through knowledge of the dangers of contagious diseases, he may throw out comb or supers containing dead and diseased stock. Bees from healthy colonies will gather the honey from the supers and old combs, and thus communicate the disease to their own colony and to the larger yards of bees. It is by meeting the beekeepers at the frequent county meetings and teaching him prevention of disease that all beekeepers profit."

At this writing, Feb. 16, we are having the

warmest weather ever known for this time of the year. Yesterday the thermometer registered 70 degrees. It has been quite an open winter in Iowa. The bees which have been wintered out of doors with plenty of good winter stores will probably be in better shape than those wintered in the cellar, all other things being equal. It will be quite necessary to examine the outdoor wintered bees early if there is danger of insufficient food. Our bees have been flying freely this week and carrying water, which proves they are rearing a larger number of bees for this time of the year than usual.

We had the unusual experience of having a swarm of bees come out of a hollow log that had been brought in from the timber, where some friends had cut a tree containing this swarm, cutting off about 4½ feet of the log and giving it to me. I think it was a new swarm that went into the tree last season. There were no moths in the tree or the combs although I could only see a small portion of the combs at the top end of the log. I do not know what would have caused the bees to have come out unless it was because of their lack of winter stores, so I gave them a cake of sugar candy today. There was quite a large number of bees in the swarm; looked for the queen but did not find her. It may be she remained in the tree with a few of the bees which did not fly out.

I had rather hoped to be able to attend the convention of the American Honey Producers' League at Indianapolis but on account of special meetings I could not get away at this time. We will all await with great interest the report of this convention. We have need of the kind of work this organization is outlining to do. With the efficient officers and committees

the League now has and the faithful cooperation of our state and local organizations, I feel there is every reason to believe we shall be able to accomplish a great amount of good for beekeeping. We should each be a booster for the new organization and thus promote the best interests of our beloved industry. A great deal has been said for and against the old National Beekeepers' Association. Some of this criticism may have been just, but I believe a great deal has been unjust. It has accomplished much good that only a few perhaps have known about. It was a committee from the National Association which went to our national government and got the apportionment for the extension work in beekeeping which has been one of the great factors in putting beekeeping on a paying basis in some of our states. I feel about this as Bishop Brooks said in reply to a caricature upon himself:

"And this is then the way he looks,  
This tiresome creature Phillips Brooks,  
No wonder, if 'tis thus he looks,  
The church has doubts of Phillips Brooks.  
Well, if he knows himself he'll try  
To give the doubtful looks the lie.  
He dares not promise, but will seek  
Even as a Bishop to be meek;  
To walk the way he shall be shown,  
To trusts that are not his own,  
To fill the years with honest work,  
To serve his days, and not to shirk;  
To quite forget what folks have said,  
To keep his heart and keep his head,  
Until men laying him to rest,  
Shall say, 'At least he did his best.'"

The outlook is quite good in this section of the country to keep the price of honey somewhere near what it is at the present time. No. 1 section honey is still selling at 35 cents a piece and extracted honey at 30 cents in the smaller containers. It is true now more than ever before that the beekeepers must develop the home market. He should be able to tell

the other fellow what his honey is worth or selling for rather than have the commission man, grower, or even the consumer set the price for him. With the present scarcity of honey and increasing demand for the most delicious sweet nature is providing for mankind, let the beekeeping fraternity look forward to the gathering of the new crop of honey with hopefulness.

### UNITING TWO SWARMS

Editor Domestic Beekeeper: Some time ago I wrote asking how to unite two swarms of bees, as I could find nothing in the bee books to give me the information; it was getting late and I did not believe they would unite it done in the Alexander way, and since I had the swarms I wanted to save them. They were late swarms and had not much honey, but were fine Italian bees. This is the way I did it:

Having a super full of honey, that I took from one of the other hives, I took all the full combs and put them in a regular hive. Then taking the so-prepared hive to the two colonies, I selected the queen I wanted to keep and put her in the prepared hive, and taking the combs with the bees from the hives, brushed all the bees into the prepared hive, first one comb out of one hive, then one out of the other hive, so that when I got through with them they were so completely mixed that there was very little fighting. In fact I lost but very few bees because the whole were too thoroughly mixed. I think that if they were not put on strange combs they would fight, but since they could not marshal their forces together they didn't. When they were used to the new surroundings they were all used to one another. The last they were out it looked as if they always had been together.

I hope the above may be of interest to some of your readers.—W. F. Schmeiske, Binghamton, N. Y.

## February Criticisms

Some of Geo. A. Stinebring's "pet theories" (page 5) seem to me to be a little off.

First he says "acres and acres of blossoms will not produce honey unless the condition of the atmosphere is right." This is not very explicit. If the condition of the atmosphere is not right the plants won't blossom and won't even grow and may freeze to death.

Why won't the condition of the soil (moisture, fertilizer, lime, etc.,) have as much if not more effect than the atmosphere.

Then he says "honey dew is pure." "The flowers take it from the atmosphere and if it is plentiful it may be deposited on some of the leaves of the trees or blades of grass." Also

he says, "We need the flowers to take up the honey from the atmosphere."

He is very much mistaken. Honey does not come from the atmosphere but from the plant through the flower and it does not come from honey dew but from nectar which is composed of honey and water.

He says "bees will store from twenty to twenty-five pounds of honey in the larger frames while they are building a pound section of comb." I think he means comb-honey. What he says may be true in some places by poor beekeepers who do not know how to raise comb-honey.

He says, "I have found it unprofitable to

keep a queen when she is more than two years old." He may find out that it is better to have new queens each year unless he wishes to breed from a few good ones the second or third year.

On page 11, I think if A. H. Schmidt makes the hooks longer and perhaps further apart the hive won't feel so top-heavy, also if he has a solid handle on the block of wood and tightened the rope to a cleat there would not be so much swing to the hive and it would be more steady to carry.

On page 12 J. E. Crane says that an amateur beekeeper told him that many of his swarms went to the woods for the lack of hives that did not arrive in season.

I would suggest that he put his swarms in barrels, boxes, nail kegs, butter tubs, or anything until his hives arrive, and save dollars and dollars worth of bees and considerable honey.

On page 16 under "An Attractive Label," someone (I guess the editor) says "cool or cold weather will cause pure honey to granulate."

Before we had alfalfa honey here I tried for 2 years to granulate honey by putting it out in all kinds of cold weather, but I could not granulate it.

I read in one of the bee papers that cotton honey granulated in three days. It could not be very cold when cotton was in bloom.

Honey that I have now will granulate in a couple of months in a warm room from 60° to 70°, but the same honey when heated to 140° and sealed tight like preserves don't seem to granulate at all.

There are lots of things that I don't know and some other beekeepers seem to have the same trouble, so I want to swap ideas.

I am enclosing a label which I think is good.

On page 16 by J. W. Stine he says, "In modern beekeeping there is no need for this extra work of hunting the queen and clipping her wings," and further on he says, "This being the case and a proper record being kept of each colony, the age of the queen, her prolificness and general characteristics are tabulated."

Once I introduced 12 new queens and by careful watching I found out that five of them were superceded. Now if I had not watched them, how would I know the age of the first queen if I did not clip her wings or color her.

I do not clip or color queens, but I would like to have Stine or some one tell me how to tell that it is the old queen at the end of a year, so I can know that I am breeding from the old queen instead of a daughter or a granddaughter.

Please tell me, Mr. Stine, so I won't have to bother marking queens. (My bees never swarm or build queen cells but I want to raise queens instead of buying all of them.)

On page 21 somebody says, "The best place

to keep comb-honey is in a dry and fairly warm place" "on a shelf in a cupboard."

I have tried it on a shelf in a dry place but sometimes it gets dusty and sometimes damp and spoils. Now I put it in a 50 lb. lard pail with newspapers under the lid to make it air tight, or, nearly so, and the comb-honey keeps nice and clean for a long, long time.

On page 13 Mr. Sanders suggests that nice yellow cakes of beeswax not marketed is simply money lying idle.

During the war I had a few pounds lying idle, worth 28 cents per lb. In one month it was worth 30 cents, and went up 2 cents per month for 7 months and was worth 42 cents. 50 per cent profit.

It was about 20 lbs. and I did not want to ship less than 50 lbs. I was not trying to profiteer on 20 lbs. of wax.

His method of rendering wax is a very crude, old fashioned, unhandy, wasteful way of getting the wax. If he can't buy a new wax press, make one with a screw or long lever.

He speaks of putting fire out with sand. I think the best, quickest and easiest way is to use a watering pot and sprinkle the air bubbles before boiling over, a few spoonfuls of water form a fine sprinkle, stops it boiling over almost as quick as a wink.

Never leave your wax over a fire in the house, and it is much safer to do all wax heating outdoors, and when your house burns up you may not get any insurance. Use an ounce of prevention.—C. E. Fowler, 15 N. 2nd street, Hammononton, N. J.

## MICHIGAN GAINING

Despite prevalence of diseases among bees, the honey business in Michigan is increasing slowly, according to B. F. Kindig, state apiary inspector. Beekeeping, says Mr. Kindig, is going rapidly into the hands of specialists who understand bees and their care, the farmers with but a few hives in many instances having abandoned the culture, due to death of the insects.

Surveys conducted by the inspector show between 8,000 and 10,000 persons in Michigan engaged in beekeeping, either as a "side line" or as a vocation. Beekeeping probably is the only source of income for between 300 and 500 families in the state at present, according to Mr. Kindig.

Michigan's honey crop in a single year is about 10,000,000 pounds. A total of 8,000,000 pounds is extracted honey. There also is an annual harvest of about 500,000 pounds of beeswax.

The outlook in the industry for 1921 is said by Mr. Kindig to be excellent.

## Seasonable Notes

*From Hy. W. Sanders, Sturgeon Creek, Man.*

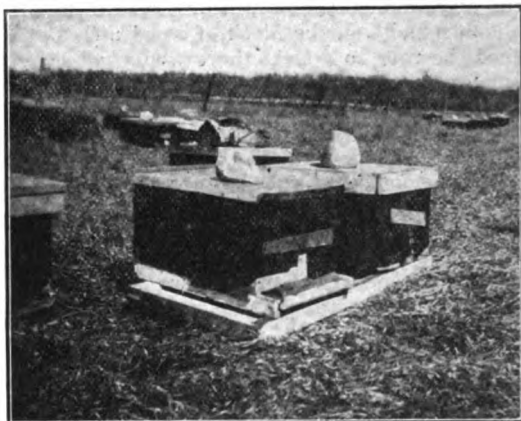
The month of March will see the first signs of the beekeepers' spring in many of the sections inhabited by the readers of the "*Domestic Beekeeper*." Away up here in Manitoba we do not often get much to interest us from the beekeeping point of view until April, although I remember one year when we had the bees out of the cellar on the 12th of March. It was an exceptionally early spring and the bees had dysentery in the cellar, so out they came. It was not a great success, however, for we had snow and cold afterwards. Perhaps it might have been better to have left them in the cellar longer, though when bees have dysentery it is best to give them a cleansing flight if at all possible.

Usually we find it best not to hurry about getting them out, and from the 5th to the 15th of April is the time when we watch the weather most carefully. A good deal depends on the wintering, and if the bees are kept during the winter in a cellar built properly outdoors, deep enough to be below the frost, and in well drained ground, and if the colonies were strong and well provisioned to begin with, there will usually be no hurry in getting them out. The blooming of soft maples, or pussy willows is the best test as to when the time has arrived.

On mild days, however, the cellar should be ventilated by being opened at night (which is rather an Irish way to put it). The early riser here has the advantage, for the closing must take place at daylight or bees will come out of the hives and get lost.

The relation of moisture to temperature was the subject of writings by W. Z. Hutchinson, the founder of the "*Domestic Beekeeper*." He did not, I believe, hit the nail right on the head in the matter of moisture, for we are getting to the idea now that the bees need water to drink in winter. Simple, isn't it? Under natural circumstances the bees get it from condensed and often frozen moisture that covers the combs and walls of the hive. As fast as the bees move over the comb they thaw out a little of the frost and can thus get water to drink. If they cannot get it they suffer and even die for want of it.

Here is the incident that prompts the above. A beekeeper found his bees wintering but poorly, although he considered he had perfect conditions. They were in a dry concrete basement, the temperature regulated till it stood at fifty degrees without stirring, air was pure



HIVES PROTECTED BY TAR PAPER IN SPRING

and the bees had plenty of well ripened honey. Yet they showed the greatest uneasiness and came out in hundreds to die on the floor.

After much advice from equally ignorant beekeepers, and much study of books he came to the conclusion that the temperature was what was the matter and he determined to bring it down to 40 or 45 degrees. To accomplish this he brought snow into the cellar and shoveled it all over the floor and the faces of the hives. (This was recommended by Quinby). At once the bees seemed easier, and when the snow had melted, he saw groups of bees around the pools at the entrances drinking eagerly. Afterwards they were much quieter and better.

This may have something to do with the fact that bees seem to do better in earth and log cellars and root-houses than in concrete, except for the first season, when the concrete contains a certain amount of moisture. Many bee-cellars are now being built with concrete walls and earth floor, and that may be also a question of moisture or humidity.

It is high time to accumulate newspapers. They will be wanted for the chilly nights in April and early May. After your bees are out of the cellar go around to all of them and take the covers off. Then wrap a few thicknesses of newsprint over the hive and cover with a piece of tar paper. This is then folded down at the front and back and secured with a slat and nail. If you have been careful to take notice if any were exceptionally light when you carried them out, there will be no food



question to solve (if any were very light, you should give them a cake of candy, or combs of sealed honey before papering.) Now do not follow the advice given in the books to look for queens at this early stage. The bees are liable to kill their queens if they are disturbed at this time, and then you have got queenless colonies galore. Besides if you do look and find a queenless colony, what are you going to do? To send south for a queen is a very doubtful matter in April, and you will be lucky if she arrives within ten days, which is too late to do much good. To join the queenless colony to a weak one that has a queen endangers her life. Frankly, they are not very much use, and my own practice the past few springs has been to leave the bees alone. When the dandelions are in bloom it is quite time enough to start business and by that time the no-goods will be about played out.

A great deal may be learned, however, by watching the entrances. On a pleasant spring day, when willows are giving enough pollen and nectar to make the bees fly freely, take your note book and go around the yard. The strong, weak, and medium colonies will easily be distinguished. A week later do the same, and then again a week later, and you will know pretty well as much about your colonies as the man who opens them up and risks robbing, queen-killing, and brood chilling at this early time in the season. The bees had carefully fastened everything nice and snug with propolis last fall, and they cannot mend the broken fastenings in cold weather as the pro-

polis is hard and brittle. How would you like it if the roof was pried off your house in the winter and then replaced without any attempt being made to mend the broken tar paper.

The marketing problem is looming large in the honey world, as in everything else that is produced on the farm. There are heavy slumps reported in prices in California and other centers where honey is dealt with in large quantities. The reason is to be found in the European situation. In past years large amounts of honey have been exported across the Atlantic. Now the effects of war finance are being experienced in Europe in depreciated exchanges, and the result is that business becomes impossible in many lines. That is precisely what has happened in wheat and meat and wool and leather, and the United States is being embarrassed by her own great accumulations of good things. The export market lost, the home market is flooded and prices fall.

To the wise beekeeper the moral of the situation is plain. Sell direct to the consumer before the other fellow gets a chance. Produce the best of honey. Throw away poor stuff rather than spoil your reputation. Bottle it cleanly and label it neatly. If in the comb, have the sections well finished and not travel stained. Scrape the sections. Then get after your customers. There are but few parts of the country where a market cannot be found within ten miles, and people are crazy after honey when they get to know what good stuff it is.

## *A Home Made Electric Beekeepers' Wire Imbedder*

*By Amos Burhans, Waterloo, Iowa*

Everybody who keeps bees in quantities these days knows that they pay a tremendous dividend on their investment. This being appreciated, the average beekeeper is pretty busy with his work, the details of which seemingly never end. One of the best labor savers that I stumbled onto this spring was a fast, costless wire imbedder that I want to pass on to the fraternity. Imbedding full sheets of foundation in brood frames with a spur or rocker imbedder is at best a slow job—especially does it get tiresome if one has 100 to 200 frames in which to fasten the wax sheets.

I read the bee supply catalogs but it never came over me how handy a lightning working electric wire imbedder would be until I started to fit the foundation into a hundred frames. My boy, Bob, and I were discussing how to do the work fastest. This was before we had

started it—we were wiring the frames. That tedious job must have prompted him to ask how electric imbedders work. Well, I had to admit I'd never seen one—only heard of them. Then he asked:

"How do they work, dad?"

"On the principle," I replied, just stabbing at it in the dark, "of a wire getting hot under a short circuit, with pressure from above to force the wire into the foundation." By the time I'd uttered that, it struck me how it might be done easily.

There on the floor of the work shop was the 12 volt battery out of the car. It had been brought in to keep from freezing because it was low in strength. Don't forget that I said it was pretty well "down." One wire Bob attached to the positive and one to the negative pole where the starter cables had been fas-

tened. Then the other ends of these wires, (which were long enough to reach the work bench easily) were fastened to a nail driven into a  $\frac{1}{2}$  inch by 1 inch stick that was cut  $\frac{1}{2}$  inch shorter than the inside length of the hive frame. These nails were driven into the stick  $\frac{1}{2}$  inch from each end, neither nail projecting through. Between these nails we drove three others of the same length, each one not quite as deep into the stick as the two end nails. Say 1-32 of an inch less deep. The idea was to so place the nails that they would all bear down on the frame wire to be imbedded, forcing the wire warmed by the short circuited electricity into the wax sheet.

A  $\frac{3}{4}$  inch thick board with smooth sides must be cut to fit the inside of the hive frame. It really should be a half inch less in size. This lets the frame drop onto it easier, and come off quickly. The board should be placed on the work bench where you are wiring frames squarely in front of yourself. After having fastened the foundation with the wedge at the frame's top bar, lay the frame with its sheet of wax foundation over the board. I call it the foundation fastening board and keep it handy for that one job. The foundation must be on the bottom; the wires of the frame on top. Place one end of the nailed stick on the left hand side of the top wire of the frame, forcing it gently down against the wax. Then gently lower the right hand which holds the other end of the stick until the last nail on that end comes down to connect with the frame wire.

The circuit of electricity is closed when the imbedding sticks, two outside nails, which are attached to the wires running to the battery, touch the frame wire. The heat generated warms the wire and down it goes into the foundation wax. The wax follows the wire down and seals the wire into place, making it the neatest and most efficient wiring of foundation you could accomplish.

A six volt battery would do. Ours happened to be a twelve. But do not hold the wire down so long and tight that it will go all the way through the foundation! A bit of practice will show you how to do the trick easily and efficiently. It took us seven minutes to rig the idea into workable form. And it is so quick in its work that we imbedded a hundred frames in an hour. With the old spur imbedder it would have taken at least three hours. Try it yourself. Or if you have or buy an imbedder without the batteries, just hook it onto the cars' battery.

"Amazing" is the best word to describe the way the renewals have been coming in. And the new subscribers cover the entire United States, with some from as far away as Sweden, France and China. We cover the earth.

### LITTLE NOTES OF THE INDUSTRY

Newly elected officers of the Ohio State Beekeepers' Association are: F. B. Moore, Columbus, president; F. W. Summerfield, Toledo, vice president; Prof. J. S. Hine, Ohio state university, secretary-treasurer; E. W. Long, St. Paris, assistant secretary. A committee is considering the question of affiliating with the American Honey Producers' League.

Received: 1921 price list of the Canadian Bee Supply & Honey Co., Ltd., of Aurora, Ont.

Bruce Anderson of Terraceia, N. C., recently named president of the North Carolina state association, is working hard on association activities, being ably supported by his executive committee. More service for the beekeepers of the state and a great enlargement of the industry are on the program.

Montana beekeepers at their annual convention petitioned the state representatives in congress to procure a tariff on honey imports. Other states are falling in line with this movement. New Montana officers are: S. F. Lawrence, Hardin, president; B. J. Kleinhesselink, Big Timber, vice president; Robert A. Bray, Big Timber, secretary, and F. E. Cligt, Huntley, and B. F. Smith, Fromberg, executive board.

Kansas beekeepers held their annual meeting in Topeka this year, with a large attendance and splendid programs.

Honey imports into the United States the last six months of 1920 totaled 392,118 gallons. Heaviest imports were in August, and Cuba and the Dominican republic led in total amount sent to this country. Beeswax imports for the last five months of 1920 totaled 1,028,430 pounds.

Montana beekeepers will try and organize a cooperative selling agency, the state executive committee having the matter in hand. Headquarters will be at Billings. A slogan was adopted, "Montana Honey on Every Montana Pantry Shelf," and an advertising campaign designed to popularize Montana honey will be undertaken.

The Rocky Mountain Honey Co., of Salt Lake City, Utah, is a newly incorporated concern organized with the following officers: George H. Sutton, president; Max Clark, vice president; Edgar D. Hodgson, secretary-treasurer, and Jens Palfreyman and Charles M. Morris, directors. Capital stock is \$5,000.

### HONEY MARKETS AND PRICES

There has been no great change in the condition of the honey market since the last Beekeepers' Letter was issued. The wholesale market is still completely demoralized and bottlers are doing only a hand to mouth business. One very great gain is being made, however, and that is that beekeepers are moving their honey crop in small packages direct to the consumer.

In a recent conversation with a bee supply dealer who covers Michigan territory he said that his business in tin cans of an average size of five pounds had increased to 40 times what it was ten years ago and that most of that increase has been very recently. It shows that Michigan beekeepers are making themselves independent of the wholesale market by cultivating a private trade. This is the most hopeful sign of progress that we have seen for some time.—Michigan Letter, B. F. Kindig.

### LIVERPOOL HONEY REPORT

The market continues slow with lower prices. There were about 240 barrels Chilean sold last month. Sellers are pressing their stocks at reduced prices but without result. There are offers at about 38/6 CIF but no business has resulted. Buyers seem inclined to base their prices on pre-war prices. At today's rate of exchange the value of extracted honey is about 6 to 7 cents per lb.

**Beeswax.** The market is much weaker. 7 tons Chilean have been sold at £7 per cwt. ex store, for March delivery. African and other descriptions are offering cheap around £5 per cwt. The value, therefore, in American currency is about 20 to 21 cents per lb.—Taylor & Co.

### REPORT OF STATE INSPECTOR

Two reports made of the state inspector of apiaries of the state of Utah, F. B. Terriberry, have been received at this office. They are of exceptional interest, and it is hoped to present them in an early issue.

### NEVADA BEEKEEPERS PLAN AHEAD

**FALLON, Nevada.**—The Churchill County (Nevada) Beekeepers' Association held its monthly meeting January 6 with a good attendance.

Very little honey has been shipped from this section of the state. The beekeepers here are holding for a better market with a fair price.

Considerable time was taken up in discussing future ways and means of placing Nevada honey on the market. The plan adopted by the members of the association was that we will ship our next year's crop direct to the consumer or retail dealer. A plan is now being worked out by the executive committee

whereby our next year's crop can be put up in glass containers, labeled with an attractive label bearing the name of the association with a blank space to stamp in the name of each individual producer, all the honey to be sold through the association with a uniform price. Advertising will be carried on in the big dailies till such a time as our honey will create a demand on its own merit of quality.

A committee of three was elected to look after all locations for commercial apiaries, assisting all newcomers who wish to locate here, to find a suitable location. It is an unwritten law in this locality that no beekeeper shall place an apiary within a mile and a half of an apiary already located. This plan has been carried on here for several years and is working out very successfully.

GILBERT RUSSELL,  
Secretary.

### CHANGES IN ADS

The editor hopes every subscriber will read the various advertisements contained in this issue as carefully as he does the reading matter. Advertisements keep one posted as to market conditions, often contain information of great benefit, and should be read. A journal which was devoid of all advertising would be a most uninviting publication, if you stop to consider the matter.

**Domestic Beekeeper** ads are increasing in number every issue, and they are increasing in interest too. Among those changed this month are the displays of Miss Lulu Goodwin, Mankato, Minn.; Deroy Taylor Co., Newark, N. Y.; Ratray-Hamilton Co., Almont, Mich.; G. B. Lewis Co., Watertown, Wis.; Nueces County Apiaries, Callallen, Texas; Falconer Mfg. Co., Falconer, N. Y. There are minor changes in several other display ads, and a big bunch of new classified ads. Read them all.

A first-class group of bee men who know how to talk was gathered together to address the Pennsylvania State Beekeepers' Association at its annual convention in Harrisburg recently. These included W. G. Lauver, Prof. H. C. Klinger, Dr. E. F. Phillips, Chas. F. Coombes, R. C. Wittman, L. B. Huber, Charles N. Green and Calvin C. Brinton.

A story is going the rounds of the daily papers detailing the success of John C. Holbeck of Sioux Falls, S. D., with a single colony of bees. It is said his profit from the one colony was more than that from two cows he kept. Holbeck gathered 270 pounds of surplus honey, which graded No. 1, and which sold readily at 35 cents per pound. His bees had access to 40 acres of sweet clover.

# MONEY SAVING PRICES

As the dollars increase in value, there is the greater incentive to save them. One way in which readers of the "Domestic" can save money on many items of supplies is to make use of our "ordering department." The goods are shipped direct from factory to you, at a material saving in price. Below we list a few of the leading items that we have been ordering for Beekeeper readers. A more complete price-list will be sent upon application.

Please note the reduced prices we are now able to make on the glassware below. Our customers may be assured that at all times their orders will be filled at the prices current at the time orders are received. In other words, in case of any reduction in price you will be given the benefit of such reduction without asking for it, and if too much money is sent with order, the balance will be returned.

## A Pound Flint Glass Screw Cap Jar for Honey

We have had more calls for a flint glass screw cap jar that would hold a pound of honey than all other sizes combined. The jar we have been furnishing is not the extreme tall style, neither is it the regular low jar, but one about half way between, with graceful proportions and beautiful sloping shoulder; a jar that you will be proud of when filled with beautiful honey of your own production.



H54 Jar

We quote you as follows, f. o. b. our factory in West Virginia

No. H59 pound Flint glass jar, packed 2 dozen in a paper re-shipping case, per gross.....\$7.75

We can also furnish and ship from the same factory, a nine ounce screw cap jar, that is a very desirable shape, at following prices:

No. H54 Flint glass screw cap jar, holding nine ounces of ordinary honey packed 2 dozen jars to the re-shipping case, per gross .....\$6.00

All jars have Lacquered screw caps and waxed paper liners.

### Screw Cap Jar Holding 20 oz. of Honey

Packed in 2-doz. Paper re-shipping cases F. O. B. factory per gross .....\$8.25



H59 Jar

## Friction-Top Cans and Pails

Prices of friction-top cans and pails are undergoing revision. If in need of friction-top cans or pails, or square cans, ½ gallon, 1 gallon, or 5 gallon, write for price. New price list will be ready in a few days. Send for it.

## Sections

We are offering a good grade of comb-honey sections at a considerable reduction from regular catalog price. We sold many thousand of these sections last season, without a single complaint. We quote as follows f. o. b. factory in Wisconsin:

No. 1 Stock 2-beeway sections, 4¼x4¼x1½, per 1,000.....	\$15.20
No. 2 Stock 2-beeway sections.....	\$13.90
No. 1 Stock plain sections, 4¼x4¼x1½ or 4x5x1½.....	\$13.90
No. 2 Stock plain sections.....	\$12.60

Address orders and inquiries to

**The Rattray-Hamilton Co., Almont, Michigan**

## Classified Department

**WANTED**—Man to work with bees the coming season. State age, experience and wages wanted on basis of our furnishing board. We could also furnish work by the year to a good reliable man who could handle honey, take orders, etc. Honest faithful work would be required. Reasonable wages to start. **THE ROCKY MOUNTAIN BEE CO.**, Box 1319, Billings, Mont.

**FOR SALE**—If looking for a good location and outfit, come and look this over: 30 acres good land, part un-

der cultivation; small buildings; a fine, well protected bee yard; 40 colonies of good Italian bees. An extra good bee cellar built especially for wintering bees, over which is a No. 1 honey house, fully equipped for handling the work for several hundred colonies. All in best of condition. Hives 8 and 10 frame Hoffman, square edge frames, all combs straight, all young queens—in No. 1 shape all around.

A first class wax rendering outfit, steam heat for same; a fine large uncapping tank; a Peterson cappings melter with complete outfit, tanks, honey knives, etc. Several hundred supers of good extracting combs, also hundreds empty in best of condition, all ready for comb foundation. Lot of good lumber, comb foundation, and many other articles. The small number of colonies of bees is due to having sold most of them a year ago. Reason for sale, age and can't work. **O. H. TOWNSEND**, Lake City, Mich.

### BOYER'S "QUALITY-FIRST"

## Tin Honey and Syrup Containers

Are the best and cheapest in the long run. Prompt shipments of all Standard sizes and styles.

**CAN MANUFACTURERS SINCE 1892. LARGE CAPACITY.**

If you cannot secure them from your usual Supply House, write us your needs.

**W. W. BOYER & CO., INC.**

2327-2359 Boston St.

**BALTIMORE**

**MARYLAND**

## QUEENS

### Package Bees

## NUCLEI

We shipped thousands of pounds of bees all over the U. S. A. and Canada last year, and our facilities for taking care of the 1921 trade have been greatly enlarged. We guarantee safe arrival of bees within six days of shipping point, and our 1921 shipping cage practically insures safe arrival much longer than that. Write for descriptive catalog and price lists. We guarantee prompt shipments.

- 1 pound package bees, \$3.00; 25 or more, \$2.85 each
- 2 pound package bees, \$5.00; 25 or more, \$4.75 each
- 3 pound package bees, \$7.00; 25 or more, \$6.65 each
- 1 Untested Queen, \$2.00; 25 or more, \$1.75 each
- 1 Select Untested Queen, \$2.25; 25 or more, \$2.00 each
- 1 Tested Queen, \$3.00; 25 or more, \$2.70 each
- 1 Select Tested Queen, \$3.50; 25 or more, \$3.00 each

### AFTER JULY 1st BALANCE OF THE YEAR 1921

- 1 Untested Queen, \$1.50; 25 or more, \$1.35 each
- 1 Tested Queen, \$2.50; 25 or more, \$2.20 each
- 1 Select Tested Queen, \$3.00; 25 or more, \$2.50 each

We can furnish either Three-Banded Italian Queens or Goldens

## NUECES COUNTY APIARIES

E. B. Ault, Prop.

Calallen

Texas

## CLASSIFIED DEPARTMENT

Advertisements under this heading will be inserted at the special rate of 10 cents per line per insertion, average eight words per line. Minimum charge, 50 cents per issue. Cash must accompany order, as amounts are too small to warrant bookkeeping.

### BEEES AND QUEENS

**HIGH GRADE ITALIAN QUEENS**—Pure mating. Safe arrival and satisfaction is our guarantee. A card will bring our 1921 catalogue and price list. JAY SMITH, Route 3, Vincennes, Ind.

**DAY-OLD ITALIAN QUEENS**—High quality, low price, satisfied customers. Safe arrival guaranteed in U. S. and Canada. Safe introduction. Prices: 1, 75c; 12, \$7.20; 100, \$60. Write for circular early. JAMES McKEE, Riverside, Calif.

**FOR SALE**—Golden or three-banded queens, untested only. Orders booked now for shipment after June 10. One, \$1.50; six, \$8.00; dozen, \$15.00. ROSS B. SCOTT, LaGrange, Ind.

**WANTED**—200 or less colonies of bees for spring delivery; any style hive. Remember cheap honey in sight for 1921. A. W. SMITH, Birmingham, Mich.

**PACKAGE BEES AND QUEENS**—We will shake from over 1,000 colonies during the coming season; Golden that are true to name. Also three-banders. Booking orders now; write for prices. Over 20 years a breeder. GARDEN CITY APIARIES, San Jose, Calif.

**SHE-SUITS-ME QUEEN BEES**—Prices for 1921: May 15 to June 15 inclusive \$2, ten or more \$1.75 each. After June 15, one to nine \$1.50 each, 10 to 24 \$1.40 each, 25 and up \$1.25 each. 3-band Italians. ALLEN LATHAM, Norwichtown, Conn.

**GOLDEN ITALIANS**—Two-pound package of Golden Italian bees \$4.75; 10 or more \$4.50 each. One untested queen \$1.50; 10 or more \$1.25 each. One tested queen \$2.50; 10 or more \$2.25 each. No disease of any kind. Safe delivery guaranteed. 20 per cent must accompany order. Circulars. J. E. SUTTON, Linden, Ala.

**BOOK YOUR ORDER** for finest Golden Italian Queens. It is worth hundreds of dollars for beekeepers to get them at these low prices: One, untested, \$3.00; tested, \$4.00. Guaranteed shipments start latter part May to October. No disease. Frank Skipala, Box 111, Woodbine, N. J.

**QUEENS, BEES BY THE POUND**—Booking orders now. Guarantee shipment to be made on time. FREE circular explains. NUECES COUNTY APIARIES, Calallen, Texas. E. B. Ault, Prop.

**BEEES AND QUEENS**—Bees are a side line with me and while they pay well, I am a merchant and so situated that I don't have any more time to give them. So instead of making increase this season I will dispose of them in two and three pound packages. I have 100 hives good three-band Italians at and near home and as many more blacks and hybrids farther out which I bought last year and haven't finished transferring and requeening. To dispose of the surplus I offer them as follows: 2 lbs. Italians with queen, \$6.50; 3 lbs. Italians with queen, \$8. Blacks and hybrids with Italian queen, one dollar less. Queens, \$1.25. Delivered at these prices. Packages to remain my property and to be returned at my expense. Delivery to begin April 15. May be booked on payment of 20 per cent with balance before shipping date. Reference, Bank of Baconton, Dunn's or Bradstreet. S. B. MULLINS, Baconton, Ga.

**QUEENS—ORIGINAL BRENNER STRAIN** of three-banded Italians. Equalled only by the best. Untested, \$1.50 each; \$15 per dozen. Tested, \$2.50 each. Pure mating and safe arrival guaranteed. DR. A. WRIGHT, Kingsbury, Texas.

**HARDY ITALIAN QUEENS**, \$1.00 each. W. G. LAUVER, Middletown, Pa.

### HONEY FOR SALE

**CLOVER HONEY** of the finest quality, very light in color, excellent body, and a flavor surpassed by none. In 60 lb. cans, two to the case, at \$24.00 per case. LONGFELLOW BROS., Hallowell, Maine.

**HONEY FOR SALE**—Immediate N. Y. shipments clover or sage qualities: White grade at 18c lb. or light amber grades at 16c per lb. Two 60-lb. cans in case. Light amber (50-gal. bbls.) West Indian grade, 90c per gallon. All f. o. b. New York City. HOFFMAN & HAUCK, INC., Woodhaven, N. Y.

### HONEY WANTED

**QUICK CASH** for extracted and comb. Send sample, describe and say price. BRUNER, 3836 No. Kostner Ave., Chicago.

### MISCELLANEOUS

**WANTED**—To buy 37 second-hand hives, either the large Dadant or Root hive. J. W. STINE, Burlington, Iowa.

**FOR SALE**—Full line of new and second-hand Jumbo and Langstroth bee supplies at modest prices. Send for complete list. THE HOFFMAN APIARIES, Janesville, Minn.

**SALESMAN WANTED**—To solicit orders for lubricating oils, greases and paints. Salary or commission. Address, THE VICTOR OIL CO., Cleveland, Ohio.

**FOR SALE**—10 fr. hives in flat below factory prices. Also choice white clover extracted honey, any quantity. Write for prices. C. H. HODGKIN, Rochester, Ohio.

**FOR SALE**—3000 comb-honey supers for 4x5 section, nailed and painted; run in clean yards and are practically as good as new. Also 4000 Airline shipping cases, also nailed; corrugated paper for same. Also 40,000 grooved sections with full sheets of foundation for same. This is all A1 stuff, and price away down. L. A. Coblenz, Rigby, Idaho.

### WAX RENDERING

**OUR STEAM** wax presses render the last drop of wax from Old Combs and Cappings. We charge 5c a pound for the wax rendered and buy your wax at best price. Write for shipping tags and send your Old Combs to us. THE FRED W. MUTH CO., Pearl and Walnut, Cincinnati, Ohio.

# *The* **DOMESTIC BEEKEEPER**

SUCCESSOR TO  
*The Bee Keepers' Review*



## **The Duffy-Diehl Inc.**

17-19 S. Chester St., Pasadena, California, U. S. A.

Can supply you immediately with any number of

### **THE MAC DONALD ALUMINUM HONEY-COMB**

Hoffman Frames complete, f. o. b. Pasadena.....	60c
Langstroth Frames complete, f. o. b. Pasadena.....	60c
Jumbo Frames, f. o. b. Pasadena.....	70c
Shallow Frames complete, f. o. b. Pasadena.....	50c
The New Brood Rearing Comb, f. o. b. Pasadena.....	55c

Rafael & Wing, Inc., 16 Stuart St., San Francisco, Calif., are distributors for Aluminum Honey-Comb for Washington, Oregon, Northern California and the Hawaiian Islands.

*April 1921*

15 Cents a Copy

Digitized by Google **\$1.50 the Year**

# SUPPLIES

**A SUPERIOR QUALITY**

**AT LESS COST**

We have in New York a Complete Stock of Apiary Supplies Manufactured by

**The Diamond Match Co.**

They are the largest manufacturers in the world who make Bee Supplies.

**Says a Beekeeper who has used Our Supplies—**

“Just a few lines to inform you that I am very much pleased to hear that you are going to have a warehouse in New York as I am certainly pleased with the Hives you make.”

**HOFFMAN & HAUCK, Inc., Woodhaven, N. Y.**

**GET OUR PRICES**

## Special Price on Metal Covers

*For April Only*

To introduce our supplies we offer a special price on metal covers of the best grade of galvanized and  $\frac{3}{8}$  inch pine lumber under metal with rim  $\frac{3}{4}$  inches thick and 2 inches deep with inner cover complete for \$1.00. These covers are made in 8 and 10 frame sizes and will fit over the  $16\frac{1}{4}$  inches standard 10-frame bodies. We will send a sample at this price.

Get a cover that will last a lifetime and protect your bees. We guarantee these covers to compare with the best on the market.

**EGGERS BEE SUPPLY MFG. CO.**

**Eau Claire, Wis.**



# Highest Quality of Italian Queens

## 3-Banded Queens

## Golden Queens

### Twenty-five Years of Select Breeding From the Best

After 25 years of select breeding not all of the time in a commercial way, but as large honey producers, therefore breeding or rearing a great many queens for our own use, we have a strain of pure Italian bees which we believe are unexcelled for gentleness, disease resisting qualities and honey production. Having about 1500 colonies of bees which we run for honey production gives us ample opportunity to test them out in every way. As our apiary interests extend as far north as Northern Ontario we have a chance to test in person our strain from a climatic standpoint. We find our bees stand the long northern winters with very satisfactory results.

### WHAT OTHERS SAY ABOUT THEM

M. C. Berry & Co., Hayneville, Ala.:

The queens I got from you have all the others skinned. They are gentle, best of workers and stand the long winters fine. Other queens coming from a shorter distance do not hold a candle to them.

Gilbert Plains, Man., Canada. Name on request

M. C. Berry & Co., Hayneville, Ala.:

The best queens I have ever had have come from you.

Great Barrington, Mass. Name on request

M. C. Berry & Co., Hayneville, Ala.:

I wish to inform you that one of your queens made the most honey of any in the yard. It made 250-lbs. of extracted honey against an average of 103 lbs for the yard. All of your queens made good. I never had a queen from you that did not pay a big percent on the investment.

Marion, Ind. Name on request

M. C. Berry & Co., Hayneville, Ala.:

I am pleased to say that your queens have given me every satisfaction in every way.

Toronto, Ont., Canada. Name on request

M. C. Berry & Co., Hayneville, Ala.:

The introduction of your queens in six colonies of bees that had European Foul-brood cleaned up the disease.

Pine Ridge, N. Y. Name on request

### Price List of Our Queens

Untested ..... \$1.50 each; 6 to 50, \$1.25 each; 50 to 100 and up, \$1.00 each

Tested ..... \$2.25 each; 6 to 50, \$2.10 each; 50 to 100 and up, \$2.00 each

Select Tested..... \$3.00 each; 6 to 50, \$2.75 each; 50 to 100 and up, \$2.50 each

Select Untested \$1.75 each; 6 to 50, \$1.50 each; 50 to 100 and up, \$1.25 each

Breeders \$25.00 to \$35.00 each

Prompt delivery, safe arrival and satisfaction guaranteed. Wings clipped free of charge

## M. C. BERRY & COMPANY

Hayneville, Ala., U. S. A.

## BEES FOR SALE

### GOLDEN AND 3-BANDED ITALIAN BEES

(The kind that fill from two to six supers)

In eight and ten frame hives at \$12.00 and \$15.00 each. Bees shipped by express.

Queens After May 1st

Orders booked now with part payment.

Price of Queens: \$2.00 each; \$11.00 for 6; \$45.00 for 25

Also have comb-honey for sale at \$3.25 per case of 12 boxes

Extracted Honey \$2.50 for 10-lb. Pail

Poland China Pigs \$15.00 each

Single Comb R. I. Red Eggs for Hatching (280-egg Trapnested Strain) \$2.50 per 15, \$12.00 per 100

Reference: "National Citizens' Bank"

**Miss Lulu Goodwin**

Lock Box No. 294

MANKATO, MINN.

"Griggs saves you freight"

## TOLEDO

Is the most logical place to buy your BEE SUPPLIES. A large and complete Stock of the Best Goods made carried at all times.

Quality First—Price Last

Send for Free Catalog

Beeswax Wanted

**Griggs Bros. Co.**

Toledo, Ohio

Dept. 31

"Griggs saves you freight"

Here's your chance to save many dollars from our  
Bargain List, part of which is given

## Send For Complete List

Everything new and fully guaranteed—Prices f. o. b. Newark, New York

12 and 16 oz. tall, round glass jars with cardboard lined caps in 2 doz. cardboard shipping cases, per gross.....	\$7.15
500-8 and 10 Frame Excelsior covers, each.....	89c
300-8 Frame Reversible Cypress Bottom-boards, each.....	65c
4000 all wood frames, Langstroth size, each.....	4½c
1000 Unspaced all wood Fr. Reg. top bar, each.....	5½c
2500 Shallow extracting frames, each.....	5c
500 Shallow Extracting Supers with Fr., each.....	\$1.00

A complete list and samples mailed on request.

Let us render your old combs. We guarantee to extract the last drop of wax. Send for price-list and shipping tags.

Address **The Deroy Taylor Co., Newark, New York**

## Bee Supplies---

### THE VERY BEST QUALITY AND SERVICE

We have a large stock of Hives, Bodies, Supers, Foundation and other supplies ready for immediate shipment.

Give us an opportunity to quote you our prices, we are certain you will find them attractive.

If you want The Very Best Quality for the Lowest Price, send us your orders at once. All correspondence will have our immediate attention.

**August Lotz Company**  
Boyd, Wisconsin

## The Bees as Buyers

**I**F bees could choose the wares required to do their work best, chances are they'd select "Falcon" supplies, to keep them contented and help them produce more honey.

Because "Falcon" stands for 40 years satisfaction among successful beekeepers and their colonies.

Our guarantee of safe arrival follows every article shipped from our factory.

*Order the best—write for our red catalog*

DISTRIBUTOR FOR THE CENTRAL WEST

William H. Rodman  
2027 Main St., Gateway Sta.  
Kansas City, Mo.

### FALCONER MFG. CONCERN

Falconer, N. Y., U. S. A.  
(Near Jamestown)

*"Where the best beehives come from"*

If You Want the Cheapest—Buy the Best

## A. B. Marchant

Jesup, Ga.

Breeder of Pure Italian Queens

### Two and Three Frame Nuclei a Specialty

I offer for sale 2,500 two and three frame nuclei. These bees are bright three-band Italians and free from disease, on Hoffman frames, wired and combs are all from full sheets of foundation; most of these combs not over two years old. Orders booked now, with half cash with order, balance before shipping.

Prices with queens, 2 frame, \$5.50; three frame, \$6.50. If queens are not wanted deduct \$1.25 for each nuclei ordered.

I will also start mailing queens May 5th at the following prices: Untested, single, \$1.50; six for \$8, twelve for \$15.00. Tested, \$2.50 each. Select tested, \$3.50 each. I also have a choice lot of breeders at \$5.00 each. Special prices on large lots of queens.

Now is the time to place your orders, before the best dates for delivery are all taken.

Reference: Merchants & Farmers' Bank  
of Jesup, Ga.

SAFE ARRIVAL GUARANTEED

## Marshfield Goods.

Are made right in the timber country and we have the best facilities for shipping: DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

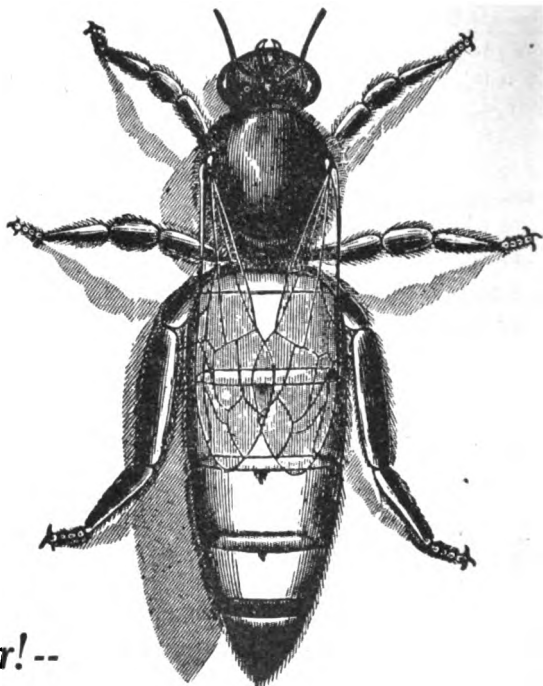
Ask for Catalogue of Supplies free

**Marshfield Mfg. Co.**  
Marshfield, Wis.

# Queens of Reputation---

**QUEENS of the Highest  
Quality From the  
Finest Mothers  
Possible**

**Prompt Service and  
Absolute Satisfaction**



## Notice Mr. Beekeeper!--

Times are almost normal again. The biggest bargain ever offered to Beekeepers if you are in need of queens. Now is your time to re-queen those colonies with queens of quality, with a satisfaction guarantee. A poor queen is not worth much; a good one will keep the hive chuck full of brood at all times. This means honey in the supers. Why? Because they have the force to get it. Satisfaction is assured. Why? Because they are as good as possibly can be reared, they are bred from the finest mothers possible, whose colonies are great honey gatherers, gentle, hearty and hustlers. Disease resisting. Each and every queen bred by the most skillful queen breeders and by the most approved methods. Mated to only select drones. Satisfaction is left entirely to purchaser. We have a large stock of queens and if you don't believe what we have said about them, we will send them C. O. D. On arrival you examine them and if they satisfy, you pay for them, and take them. If you don't think they are all we claim them to be or as good as can be reared, just return them at our expense. That is not all. After you have introduced them to your colonies and you are not entirely pleased, return them to us and we will cheerfully refund your money. It is fair.

### GET OUR BIDS ON YOUR QUEENS FOR FALL RE-QUEENING

#### —PRICES—

	1	6	12	100
Untested .....	\$1.00	\$ 5.00	\$ 9.00	\$70.00
Select Untested .....	1.15	6.00	10.50	76.50
Tested .....	2.00	10.00	18.00	
Select Tested .....	3.00	12.00	20.00	

Write for prices on larger quantities

**THE FARMER APIARIES, RAMER, ALABAMA**

"Where the good queens come from."

# The Bee Keepers' Review.

PUBLISHED MONTHLY

Entered as second-class matter November 30, 1920, at the postoffice at Lansing, Michigan, under the act of March 3, 1879.

\$1.00 PER YEAR

VOL. XXXV 3

LANSING, MICHIGAN, SEPTEMBER, 1921

NO. 9

## Some Lessons Learned From Demonstration Apiaries

By E. W. Atkins, of G. B. Lewis Co., Watertown, Wis.

Good equipment, an abundance of room for breeding and the storage of honey, together with swarm control, resulted in demonstration colonies producing 602 pounds more honey than colonies run on the let-alone plan. The results were particularly striking in localities where the above requirements were in the greatest need, due to heavy honey flows.

Six demonstration apiaries were established in Iowa in the spring of 1920 for the purpose of attempting to demonstrate methods whereby the honey-crop might be increased. The object was not necessarily to increase the crop by having more colonies, but rather by giving the colonies which already existed better management. The management was based on the behavior of bees in as much as is known of this subject, and carried out to conform with each locality. This practice must be carried out in any location to insure the best results. It is true that the behavior of bees under exactly the same conditions is the same in California as in Michigan, but conditions which influence bee behavior vary, or occur at different times of the year in these two widely separated states. This may even be true of two places only a few miles apart.

### Complete Equipment Necessary

The first essential necessary to be successful with bees is to have good equipment, and enough of it to take care of a maximum crop of honey. There was nothing fancy about the demonstration apiaries, and as the saying goes, they were run strictly to "bring home the bacon." The first job was to look over the equipment. The majority of the bees were in ten-frame Langstroth hives, and a few in box-hives. Where the Langstroth hives were in fairly good condition, their use was continued. The frames containing much drone comb were replaced by full sheets of comb foundation as soon as practical during the season. An extra

hive body with frames and foundation was obtained for each colony in Langstroth hives. A complete new Langstroth hive, consisting of two hive bodies with frames and foundation was purchased for each of the colonies in box-hives. In addition to providing every colony with two bodies, a queen-excluder and four shallow extracting supers with sufficient extra thin super foundation for one sheet for each of the shallow frames was purchased for each colony.

During the first visit to the demonstration apiaries, which was early in the spring, it was found that all the colonies had sufficient stores to at least keep them from starving, but really not sufficient to stimulate them to rear brood to the limit of their capacity should the spring have been unfavorable. We therefore had to gamble on the weather being right, as no spare honey for additional stores was available in any of the apiaries. It happened, however, that the weather was fairly favorable, and all colonies had sufficient honey to keep brood-rearing going at a pretty lively pace.

### Adequate Room

The second visit was made to the apiaries at the time the fruit trees were coming into bloom. All the demonstration colonies, including those in box-hives, with the exception of one that was infected with American foulbrood, were given their extra hive body. This hive body was placed on top of the hive which the bees already occupied. This operation was so timed that the colonies received the additional room just before the bees filled the hives they were wintered in. The colonies in one of the apiaries, where European foulbrood was present, would not have been of sufficient strength to take the second hive body had several of them not been united at the first visit. The uniting operation strengthened the colonies, and was the first manipulation in the

treatment of European foulbrood. With the fruit bloom and dandelion honey flows coming on, the bees, as they required more room for expansion, soon started comb building in the extra hive bodies, and thus the queen obtained more room for egg laying.

#### Swarm Control

At about the commencement of the main honey flow (clover honey flow) the demonstration colonies were manipulated to control swarming. This was done by placing the queen with one frame of brood in the hive body on the bottom-board, and the remainder of the space in this hive body was filled with empty combs of foundation. A queen-excluder was then placed on the hive body with at least two shallow supers on top of it. The strongest colonies were given three supers. On top of the supers the hive body containing the brood was placed.

The method used for the colonies in box-hives was modified in this way—the majority of the bees in a box-hive were drummed up into the new hive body which was on top of the box. The hive body was then placed on the stand of the box-hive and given a bottom-board. The box-hive was placed immediately in the rear of its original stand. Care was exercised to see that there were sufficient bees left in the box-hive to take care of the brood. For this purpose not such a very large force of bees was required, as the queens were laying in the new hive bodies, and the brood in the

box-hive was mostly in the capped stage. The honey flow was also on, so that there was but little danger of robbing. All the flight holes in the box-hives with the exception of the main entrance of each were completely closed. The main entrances were contracted down so that only six to eight bees could get in or out at one time. Two weeks after the box-hives had been setting behind the new hives, their bees were drummed up into an empty box and shaken in front of their respective new hives. The box-hives were then broken up and their combs rendered into wax.

#### Removing Surplus

The fourth visit was made to the apiaries at the close of the clover honey flow. At this time the crop was taken off. In doing this all the honey in the shallow supers that was capped was removed. The honey stored in the deep hive bodies, which were formerly the brood-chambers, was left on the colonies. After the main portion of the light honey crop was removed, care was taken to see that all the colonies had plenty of super room, as a fall honey crop is usually obtained in all these Iowa localities.

#### New Year's Preparations

The important reason for leaving the upper hive bodies on the hives was to insure each colony having an abundance of stores for the following season's spring brood-rearing, should the fall honey crop prove to be inadequate for that purpose. In this case, with the exception



This photo shows the value of a demonstration apiary, as conducted under the plans outlined in Mr. Atkins' article

of one apiary, it happened that no honey was obtained during the fall. We did not have to worry about this, however, as there was plenty of honey in the hives. The plans were, should there have been sufficient fall honey gathered, to have removed all the light honey stored above the first hive body, and in its place to have left at least twenty-five pounds of fall honey as an insurance against unfavorable conditions for honey gathering the following spring. In order for a colony of bees to develop its quota of brood, which is at least the equivalent of twelve frames, by the beginning of the clover honey flow, it will consume at least ninety pounds of honey from the time flow ceases in the fall until the colony has increased its population up to the point where it can develop twelve frames of brood. Therefore, when a colony of bees is provided with as much as fifty or sixty pounds of honey, it still has to obtain at least thirty pounds during the spring. While leaving what appears to be a big quantity of honey, fifty or sixty pounds, the beekeeper is still trusting to nature to provide at least one-third of the necessary food. This, nature usually provides, and oftentimes, much more. However, the good beekeeper knows that there are many seasons when the weather is quite unfavorable for honey gathering in the spring, and to eliminate this gambling feature from his business

(CONTINUED ON PAGE 18)

### BEE CENSUS FINDINGS

The number of hives of bees on farms in the United States on January 1, 1920, according to the Fourteenth Census, was 3,476,346, as compared with 3,445,006 in 1910, an increase of 0.9 per cent. In making comparisons between these two years the change in the date of enumeration, from April 15 in 1910, to January 1 in 1920, should be taken into consideration. Especially in states where the winters are severe, the number of hives in April of any year is likely to be considerably less than the number in January. In such states the 1920 figures may be somewhat too high for a fair comparison with 1910. It is probable, therefore, that a count of the hives in April, 1920, would have shown a decrease, as compared with the number in 1910, rather than even a slight increase. Eight states reported over 150,000 hives each in 1920. They were: Texas, 235,111; Tennessee, 191,898; California, 180,719; North Carolina, 163,956; Illinois, 162,630; Missouri, 157,678; Kentucky, 156,889; Alabama, 153,766. Tennessee showed the greatest

absolute increase, with 47,417 more hives in 1920 than in 1910, and Oklahoma was second, with 27,330 more hives in 1920 than in 1910.

### RENTS "PASTURAGE" FOR BEES

A new business enterprise has been started by the Henry Field Seed Company of Shenandoah, Iowa, which has fields of Hubam Sweet Clover under cultivation. The company has rented its fields for "pasture" of several hundred colonies of bees. Three years ago Mr. Field secured 50 seeds of the new Hubam Clover Seed; from these he secured 49 living plants. All the seed was sown and the next year the process was repeated with the result that he has secured six acres of seed from which he sold \$5,000 of seed at \$5 a pound. This year he has 130 acres of this variety of clover.

### OHIO AND MICHIGAN IN RACE

COLUMBUS, OHIO.—This summer's prolonged dry spell and excessive heat cut honey production far below normal in all the principal beekeeping states except Ohio and Michigan, and will serve to make these two states close contenders for second place in total production, according to F. B. Moore, Columbus, president of the Ohio State Beekeepers' association.

The Buckeye and Wolverine states were only slightly hit by the drought so far as honey production is concerned, because it came after the honey-supplying clovers were in bloom. In most states the heat came so early as to interfere with the nectar bearing plants.

California, which for years has ranked far in the lead of any other state in honey production, will have a yield of only 12 per cent of normal this year, according to Moore, but even at that will retain her place at the top.

Iowa, which usually ranks second, has only a 50 per cent crop this year and will drop away down in the list. Normally Iowa furnishes 6 per cent of the nation's annual production.

New York, Illinois, Wisconsin and Michigan, each of which normally produces 4 per cent of the nation's crop, all have poor yields this year, except Michigan.

Since 1910 Ohio has furnished annually about 3 per cent of all the honey produced in the country, but this year, on account of excellent crop conditions, recent development of some large commercial apiaries and improvement in beekeeping methods generally, this state will produce easily 5 per cent, Moore asserts.

# The Beekeepers' Review

LANSING MICHIGAN

ONE DOLLAR PER YEAR

PUBLISHED MONTHLY

E. A. LITTLE, Lansing, Michigan  
Editor and Publisher

ARTHUR RATTRAY, Almont, Michigan  
Associate

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DISCONTINUANCE—All subscriptions are stopped at expiration.

ADVERTISING RATES—Advertising rates will be sent on request.

We believe in a square deal for everybody interested in beekeeping and honey-producing. We believe in a community of interests—those of the manufacturer, the jobber, the inspectors and instructors, the beekeeper. Provided there is cooperation on the part of every interest, the industry may take high rank in the nation's activities. Without cooperation there will be no progress.

## THE REVIEW WELCOMED

From hundreds of subscribers come congratulations over our decision to revert to the original name of this journal, The Beekeepers' Review. The memory of W. Z. Hutchinson, who first launched the Review on January 10, 1888, seems to have grown with the passing years. He was loved and respected by the entire beekeeping world, his practices followed, his advice treasured, and there was a distinct feeling of loss when his journal in January, 1917, became known as the Domestic Beekeeper.

The present editor is not able to give a chronological account of the high lights in the journal's history. Started in 1888, it was published at Flint, Mich., Detroit, North Star, Almont, and now Lansing, Mich. E. B. Tyrrell of Detroit, now in charge of the apiary exhibit at the Michigan state fair, and a prominent financier of the Michigan metropolis, was its editor for a period. E. D. Townsend of North Star then became its editor, and for a time the journal was owned by the National Beekeepers' association. Mr. Townsend changed the name to The Domestic Beekeeper, feeling that such a name more nearly expressed the policies of the journal.

Mr. Townsend disposed of the journal to Arthur Rattray of Almont, a prominent Mich-

igan beekeeper and supply man. Mr. Rattray conducted the journal for a period of about one year, disposing of it to E. A. Little, the present editor and publisher, but remaining connected with it as associate editor. The October-November issue of 1920 was combined in one number, owing to the delays incident to the change in publication offices.

So it is seen that with the issuing of the January number of 1922, the Review will be starting its 36th year of publication. Already it is being planned to make it a big "birthday" edition, and we will welcome all the suggestions possible on making it an issue that will be treasured for years to come. Perhaps some readers have complete files from the very start of the journal. If so, we could profitably use a complete statement of the important events in the Review's history, and all other items which are appropriate.

And this coming January edition ought to contain the advertisements of every supply house and big honey producer and dealer in the country. Be ready when the call comes.

## SUBSCRIPTION RATE NOW \$1.00

Because we have been able to effect certain reductions in the cost of printing, and anticipating other savings, THE BEEKEEPERS' REVIEW, the old name to which the Domestic Beekeeper returns with this issue, resumes the rate of \$1 per year.

The editor believes truly that the journal as well as several other beekeeping journals, is worth \$1.50 or even \$2.00 or more, to any beekeeper. But beekeepers have become accustomed to a rate of \$1.00 per year for their journals, and we have neither the inclination nor perhaps the courage to attempt to change habits which had their inception years before we were born.

We expect, under the \$1 rate, to increase our subscription list more rapidly than ever. We're going to expect our present readers to recommend the REVIEW to their friends, and even to secure the subscriptions themselves and send them in. We expect soon to have such a list that we can justifiably charge a higher advertising rate, which is now entirely out of line. Then, with increased revenue, we're going to be able to produce a better journal, a bigger journal. It's a wide circle, with everybody benefiting.

Will you let the editor know that you approve the change in name, the new rate, and his conduct of the journal during the last few months? Will you send in your renewal



promptly, and add a few new names, too? If you do just that, we'll feel pretty well satisfied with the world 'neverthing.

### LEARNING THE BUSINESS

To acquire skill in manipulating bees and to learn the proper management so as to obtain maximum results, the best method is to spend a season in the apiary of an experienced beekeeper. If one contemplates making beekeeping an occupation this is to be especially desired. It is usually possible to find employment at a small wage in the apiary of a specialist for a season.

There are many books on beekeeping and all have points of merit, and reading the various journals devoted to the subject is to be commended. Reading alone does not make a beekeeper, but by practice these things become a part of his beekeeping knowledge.

A good way to learn beekeeping is to attend some school where a thorough course in this subject is given. Recently a few agricultural colleges have put in thorough courses in this subject and interest is now being aroused in the work. In the apiary of an experienced beekeeper the beginner gets more personal attention than he does in a large class, but the theoretical side is neglected. Consequently when he begins to keep bees for himself, not knowing local conditions, he will be at a loss to know what to do. In a regular course proper emphasis may be placed on the various subjects. The ideal plan is to take the prescribed course and spend the following summer in the apiary of the best beekeeper available.

### HONEY IN CANDY

In the August issue of the Domestic Beekeeper, Mr. Hugh Ewing suggests that someone should publish a book in which recipes for the use of honey in candy should be given. For the benefit of those who desire recipes of this kind, I would like to call their attention to Farmers' Bulletin No. 653, which can be procured free of charge from the United States department of agriculture. This bulletin contains numerous recipes for honey and tells enough of the handling of honey in candy-making to allow any one with the experience to not only use honey in all recipes calling for sugar, but to invent new varieties of candy in which honey is the foundation.

The American Bee Journal has for sale a booklet entitled, "Facts About Honey," that contains quite a number of recipes for candy.

The A. I. Root Company will shortly issue a honey recipe booklet which also deals with candy making.

The American Honey Producers' league has ready for mailing an advertising booklet on the use of honey which includes some recipes for candy.

The Texas Honey Producers' association will distribute at the Dallas Fair and thereafter the honey book in which candy making is treated very fully.

In addition to these now available sources, Dr. E. F. Phillips has been making an investigation on the use of honey in candy making and will shortly publish his results. With this bunch of information so easily obtainable, anyone interested in the use of honey in candy making should avail themselves of the opportunity to obtain this information.—H. B. Parks, San Antonio, Texas.

### IOWA ASSOCIATION ORGANIZED

WATERLOO, IOWA.—The Blackhawk County Beekeepers' association was organized the evening of July 29, 1921. Following officers were elected to serve until the regular annual meeting in October: President, M. M. Moore, Waterloo; vice-president, M. W. Oman, Waterloo; secretary, Amos Burhans, Waterloo. The executive committee, which includes the three officers mentioned, is also strengthened by the addition of two other members, namely, H. S. Hays, Cedar Falls, and Roland Nutt, Waterloo. We plan to hold a field meet with the assistance of Mr. Newman Lyle of the Extension Department of the Ames Agricultural College as demonstrator, in September.

The objects of the association are to promote good beekeeping, to assist in the eradication of bee-diseases in its territory, to foster the interests of its commercial honey producers, to enlarge its honey market, to hold an annual field meet and to secure the location of a state demonstration apiary within its district and to cooperate with the state and national beekeepers' associations or any other efficient means.—Amos Burhans.

Intermountain Region: Prospects are for an average crop on the whole, with decided variations in certain sections. In eastern Oregon and southwestern Idaho the flow did not commence until July 20, and the outlook is for not over half a crop. Demand has slightly improved and shipments are increasing.

## Michigan's Successful Summer Meeting

The third annual summer meeting of the Michigan Beekeepers' association which was held in Alpena, August 3 and 4, was attended by about 80 beekeepers. No effort was spared by the officials in charge of the reception of the visitors. A band concert and two auto tours through the county were provided for the entertainment of those attending, and the beekeepers were so well pleased with the city that they voted to hold the next summer meeting in Alpena again.

The attendance would have been much larger but for the drouth which has seriously injured the honey crop in some sections of northern Michigan. Several auto parties came from the Saginaw valley and Thumb districts, but few beekeepers from northwestern Michigan were present. The spirit of the meeting was optimistic for the future, the prevailing interest being in the honey market and probable prices for the crop.

The absence of several speakers made it necessary to alter the program somewhat. Ernest Root was unable to attend, likewise Mr. Demuth, Mr. Bartlett and Mr. Kirkpatrick. The convention was opened by the delivery of the invocation by Edwin Ewell. Then followed an address of welcome by the Hon. L. G. Dafoe, mayor of Alpena. The mayor heartily welcomed the beekeepers to the city, in which, as he said, 95 per cent of the people owned their own homes. He further stated that the factories and industrial plants of the city had not been closed as were those of many other cities; that Alpena might one day become one of the important lake ports of the country should the St. Lawrence waterways project carry through, and that honey might be shipped from Alpena direct to foreign countries on ocean liners.

A. P. Button, in his response, thanked the mayor on behalf of the beekeepers for the kind welcome extended, and expressed appreciation of the opportunities awaiting improvement in Alpena.

Edwin Ewell, extension specialist in Beekeeping, M. A. C., in speaking on "Cooperation in Field Work," said that the beekeeping industry in Michigan was continually driving straight ahead, keeping pace with the development of the natural resources of the state. He said that the southern counties of the state were better organized for beekeeping than the northern at present, but that northern coun-

ties were fast getting under way. Mr. Ewell urged beekeepers in communities to get better acquainted with each other, through their local associations, citing the good which comes of cooperation and organization both in matters of business and recreation. He stated that the big demand was for better beekeepers, beekeepers who will assist in checking the spread of bee-diseases and in the spreading of information to less fortunate neighbors. He explained that the work of the extension specialist is chiefly that of carrying the information obtained by scientists in the laboratory to those who may be able to use this information in practice.

C. O. T. Scheetz, county agricultural agent for Alpena county, expressed the hope that the holding of the meeting in Alpena would open a new field of opportunity for the county, and said that he was ready to assist the beekeepers of the county in any manner possible. He stated that the climate and growing season of the county compared favorably with that of counties farther south, and that the soil, crops and shipping facilities were all conducive to development of the beekeeping industry there.

B. F. Kindig, director, office of state apiary inspection, in his talk on "Cost Accounting in Honey Production," outlined a simple method of keeping account of receipts and expenditures in the bee business, thus enabling the beekeeper to find out at the end of the year whether he has made or lost money. Mr. Kindig has promised to present his paper at a later date to be published for the benefit of those who were not at the convention.

E. W. Atkins, the only out-of-state speaker present, gave a very instructive talk on "Demonstration Apiaries in Iowa." Briefly, Mr. Atkins showed, by proper management of the colony during the spring and previous to the honey flow, that it was possible to secure a yield of more than twice as much as was obtained by the owner with the usual management given. A two-story brood-nest was used on the demonstration colonies, and the honey was produced in shallow extracting frames. In every case the results obtained from the demonstration colonies were so favorable as to leave no doubt in the mind of the owner as to which method of manipulation was the most profitable.

Speaking on "Organization," Allen King of

Lachine said that the benefits resulting were such that all beekeepers in counties should organize. He pointed out that too often the organization does not have meetings often enough for the good of the members, and urged every beekeeper to affiliate with his county and state organization for his own good. He mentioned the different ways that an organization can operate for the good of its members, such as the comparing of methods used at meetings, the stimulating influence of outside speakers, the saving of money in the purchase of supplies in quantity and the discussion of disease problems.

Miss Elsa Fischhaber, speaking on "A Ramble and a Review," mentioned the great variety of terms used in description of color in bees and queens and urged more standardization of terms and trade names. Some of the problems connected with the rearing of queens were discussed. Factors influencing color in the offspring come largely from the queen, according to Miss Fischhaber. She also advanced many arguments for the wider use of honey as a food, citing cases in which honey was used in the diet of both children and older people to correct apparently incurable cases.

Norman Shaw, of the Starr Commonwealth for Boys, Albion, Mich., gave a very interesting account of the development of the Commonwealth from the first building to the present, and described the nature of the school and the work that is being done by Mr. Starr.

Russell H. Kely gave a brief discussion of the making of honey vinegar. The recipe for making the vinegar, together with qualities of the finished product were given.

During the business session it was voted to make the Domestic Beekeeper the official organ of the association. It was also voted to continue the state fair exhibit of honey the same as in previous years.

The appreciation of the beekeepers for the kind reception received at the hands of the city of Alpena was expressed in a motion which carried unanimously.

The two auto tours provided by the Retail Merchants' association gave the beekeepers a chance to see the county thoroughly.

"I am pleased to learn the name is to be changed back to The Beekeepers' Review," writes a Texas beekeeper. "It will seem like old times to be reading The Review again. The name is certainly more appropriate than the present name, and more descriptive of its field of activity."

## From Our Subscribers

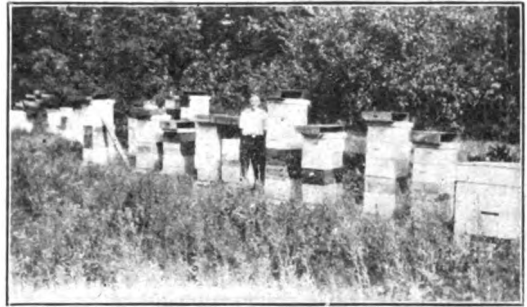
August 22, 1921.

The Domestic Beekeeper,  
Lansing, Mich.

Gentlemen:

Enclosed you will find a picture showing a section of one of our apiaries which we thought might be of interest to you.

This is a new yard and all the colonies shown were started with 2-lb. packages of bees May 1. Each colony had one drawn



Section of one of the Meineke & Son Apiaries, just out of Chicago

comb on which it was shipped. All other brood and super combs were drawn out from foundation.

The picture was taken at the height of the honey flow which was an exceptionally good one from alsike and basswood. By looking at the picture you will notice that many of the last supers put on are not painted. This was because they had to be assembled and put on the hives in a hurry as we were not prepared with four or five supers for package bees.

E. MEINEKE & SON,  
Chicago, Ill.

Wheatland, Wyo., has been receiving considerable advertising in Ohio and other eastern states. The Harter Apiary at Wheatland every year ships a carload or more of honey into the state, and he advertises. A large advertisement in the Canton, Ohio, daily, after setting forth the merits of the honey, its excellent flavor, etc., impressed the reader that Wheatland is one of the most ideal places in the world for the production of honey. "Harter's Wheatland Honey" is repeated 16 times in the advertisement. That is valuable advertising.

## *How to Introduce a Queen to a Colony That Has Been Queenless Ten Days or More*

*By H. D. Murry, Calallen, Texas*

Undoubtedly the best time to introduce a queen is when the old queen is first removed. I was asked by a prominent beekeeper once, "How long do you wait after removing a queen before introducing another?" My reply was "About a minute." He admitted that he had the best success that way. The longer we wait, the more difficult the problem becomes. The bees usually start queencells about two or three days after the removal of the queen, and after that they seem to prefer to wait until one of their young queens emerge rather than accept a laying queen. If the colony has not been queenless MORE than ten days, there should be sealed queencells among the brood. In this case, the cells must be destroyed before attempting to introduce a queen. But sometimes colonies become queenless and fail to start queencells. The apiarist just finds them queenless and no queencells, and he does not know whether they have a virgin queen or not. The first thing to be done is to find out whether or not a virgin is present. To ascertain this, I insert a comb of brood containing more or less young larvae and eggs. If the colony is really queenless they will usually start queencells on this young brood. Then we know they are queenless and we may introduce a queen by any of the generally approved methods. In the case of a colony that has maturing queencells, the queencells should first be destroyed; then insert a comb with brood in all stages from that sealed, to young larvae and eggs. They will usually accept a queen introduced by any of the usual methods. Always, any queencells present must be destroyed.

"But," I hear some one say, "if we insert a comb with eggs and larvae in a colony that has a virgin queen, the bees will kill the virgin and start queencells." I have been seeing that in print and hearing it spoken for twenty-five years and have yet to find corroboration of it in my experience. When I was engaged in the queen-rearing business, I often found a nucleus with a virgin and no brood. If nothing was done about it, the bees were liable to swarm out with the young queen when she went out on her mating trip, and they were by

no means careful to return to their own hive. To avoid this, I made a practice of inserting a frame of brood in such nuclei, and if I ever lost a queen by it, I didn't know it. It often occurs that a queen is lost on her mating flight, and I suspect that this fact has led some to believe the bees killed the virgin because of the larvae and eggs introduced.

In the case of colonies that have been queenless any considerable time, there is another method of supplying them with a queen, that I prefer to the method given above; and that is to go to a colony that has a laying queen, remove her with two combs of brood and insert them in one side of the queenless colony with an empty comb or sheet of foundation between the queen with her brood and bees and the queenless bees. This should be done quietly so as to not get the bees excited and running about so that the queen might become mixed up with the queenless bees and be balled. If properly done, I never knew a failure of this plan. The colony from which the queen was drawn is then requeened immediately by any of the usual methods. I should have stated that the combs with the queen are taken with all adhering bees.

This method of introducing a queen is one of the best to break up a colony of fertile workers. Also, it is often found difficult to introduce a queen to a colony of black bees. Just form a nucleus on a new stand from the brood and bees of the colony to which we want to introduce the queen; then introduce the queen to the nucleus. After the queen gets to laying, remove the queen from the original colony and insert the nucleus with the young queen in one side of the colony as given above.

I once had a letter from a prominent beekeeper in Canada, stating that he had bought an apiary of 25 colonies of the most vicious black bees he ever saw, and he wanted to know how to introduce Italian queens to them so as to avoid the trouble with his neighbors. Every experienced beekeeper probably knows how difficult it is to get black bees to accept a queen of another race. I gave him this method and he reported it a perfect success, every colony accepting the Italian queen.

## *Selling the Honey Crop*

*(From Successful Farming)*

The farmers who have gathered a crop of honey, will do well to be careful about marketing it, as they might just as well get a good price for their product as a low one. Indeed, because this is so true, it is not unimportant to call attention to a few considerations, in order that one's apiary profits may be just that much more at harvest time.

In the first place, everyone who keeps bees should always be provided with ample supplies so that it will be possible to leave the honey on the hive until it is fully ripened. It is clear that a shortage of equipment may lead one to remove and extract the honey before the bees have thoroughly ripened it. But unripe honey soon ferments and sours and such honey is of no value as a product for trade. Honey which is ripe and sealed may be kept for years without any deterioration. And as the bees seal only cured honey, remember to extract only frames that are capped.

Remove the honey you wish to extract in the following manner: Lift out a sealed frame, brush it free of bees, and place it in a box or extra super. When full, cover the honey so as to prevent robbing, or take it at once to the extracting room. Some producers prefer to take off the supers as soon as the honey is ripe, others let all the honey remain on the hive until all the crop is gathered. The latter method requires more equipment, but saves time. Some beekeepers use a device called a bee-escape board to get the bees out of the super. The device greatly expedites the work. This thin board is placed under the super of ripe honey and the bees can go down to the brood-chamber below, but they cannot again enter the super of honey. There is less danger of robbing, and stinging is practically eliminated in using this method.

When the frames of sealed honey are removed from the hive, it is well to extract at once, or at least during the warm weather. It is much more difficult to get the honey out of the combs in cold weather. Under some conditions it may be well to keep the light or summer honey from the darker or fall honey. The frames of honey are uncapped with a knife, which for rapid work, should be kept warm by the use of hot water. The cappings on the cells should be removed with the least possible injury to the rest of the comb. After

this has been accomplished, the stripped combs are then placed in the honey extractor. This is a machine which throws the honey from the comb by centrifugal force. The honey is drawn from the bottom of the extractor and placed in storage.

Even with extreme care bits of wax will be found in the honey when it is drawn from the extractor and these must be removed before it is placed on the market. If one has a storage tank into which the honey can be placed, this surplus matter will rise to the top and clear honey can be removed from the bottom. For the small producers it will undoubtedly prove more satisfactory to strain wax particles from the honey. Such a strainer can be easily made from a frame of screen wire, with a cloth cover.

If your crop is comb-honey, after most of the sections are nicely capped, remove the supers from the hive. This will prevent the bees uselessly traveling over the filled sections and discoloring the cappings. Such sections of honey are called "travel stained" and sell for a lower price than unstained sections. The method of removing the supers by the bee-escape method is most satisfactory, although it may consume two or three days. It is not wise to attempt to drive the bees out of comb-honey supers by the use of smoke as the bees may become angry and uncap some cells. Further, the sections may become discolored from the smoke. Sometimes, in order to get white honey it may seem best to remove the supers before all outside sections are capped. Such sections may be replaced in other supers to be finished. Often one will find the sections quite stuck to each other and the super, and unless extreme care is used they will be broken and consequently rendered valueless for market purposes. All sections should be sorted carefully and the unfilled sections replaced on the hive to be finished.

Undoubtedly, the first essential to successful marketing is cleanliness. Too many who have a few colonies consider all money secured from the honey crop as clear profit. Consequently, they market it with the least possible effort, and take whatever credit on their grocery bill they can get. Often, therefore, poor products are put on the market. If you expect a top price for your honey, be certain your product

is marketed carefully and cleanly.

In most cases the beekeeper with only a few colonies will find his local market the best place to dispose of his crop. Those who sell at home are able to get more for their honey because there are no commissions, or freight items. It is a mistake to sell at retail for a wholesale price. Such a practice always tends to force the price down. Price cutting is to be condemned in every instance. Remember that if your honey is good you are entitled to a good price for it.

The beekeeper who wishes to establish a market cannot be too careful about grading his product. Every package must be uniform, and grade with others in the same class. The honey crop has not been prepared for market carefully enough in the past. Beekeepers must realize that only properly prepared goods command good prices. When comb-honey is shipped, the containers should be well made of first grade material. Much excellent honey has never commanded a reasonable price on the market simply because the container did not invite the purchaser.

Of course, extracted honey can be shipped with much less loss than comb-honey. The container you use for your extracted honey should be the container your trade wants. For local fancy trade glass containers are much preferred to tin. The trade wants to see the honey it is about to purchase. There are many sizes of glass containers and again the producer must be governed by the size of package that will sell most readily. Care must be used to offer only a high grade and uniform product and if such is done a select trade can be established.

#### CALIFORNIA MARKET SITUATION

LOS ANGELES.—It is quite apparent, from a comprehensive view of the present honey market, that a decided slump in the market bids fair to face the producer for this 1921 season. With large stock of 1920 honey yet unsold, a surplus of sugar of about a million and a half pounds above normal consumption, the uncertainty of the protective tariff, the labor situation in general, the railway legislation question, all bids fair to depress the honey market, to say nothing of other commodities. Basing our prediction upon reports from our various correspondents located in important producing localities, the crop will only be approximately 31 per cent of normal. We think the general market will not go above 10 cents for best quality and grade, graduat-

ing less for other grades. There is practically no foreign demand, and few inquiries from important eastern states market centers. Local trade good in small containers. Few inquiries from middle west in case and ton lots. However, very little rolling at this writing (August 15). The beet sugar crop not estimated as yet, but acreage in sugar beets less than last year.

The immutable law of supply and demand must necessarily provide a strong stable market. It was thus when Rome was young, is the same today, and will be the same when Time is old.—Aliso Apiary Co.

#### ONTARIO 1921 REPORT

The crop report committee of the Ontario Beekeepers' association at its Toronto meeting late in July, received reports from 442 members and 40 special reports from the foremost apiarists of the province.

Signed by the full committee, the following statement and recommendations were issued:

The quality is reported to be much better than 1920, with a good average yield in all parts.

The Committee recommends the following prices, F. O. B. shipping point:

Best Quality Light Extracted,	
wholesale .....	15c-18c per lb.
Best Quality Light Extracted,	
retail (to consumer) .....	20c-25c per lb.

No. 1 Comb, wholesale.....	\$2.50-\$3.50 per dozen
No. 2 Comb, wholesale.....	\$1.75-\$2.50 per dozen

The minimum price is recommended for barrels or whole crop, the maximum prices for part crop or 2½, 5 and 10 lb. tins. Honey in glass packages should be somewhat higher to allow for increased cost of package and bottling.

The Committee recognizes that prices of all commodities must be lower and have accordingly reduced the recommended prices considerably with a view to moving out the crop steadily. These prices show a reduction of 10 cents per lb. all round, over last year.

In a detailed report by counties, the following final figures on the 1921 Ontario crop are reached:

Number of colonies, spring count.....	21,189
Number pounds white honey.....	1,591,278
Average number pounds per colony....	75

F. B. Paddock of the Iowa State college, estimates the present value of the bees in Iowa at \$2,250,000. Including equipment, the state's total investment in bee-culture is \$4,000,000.

### THE LEWIS 1921 REPORT

The G. B. Lewis Co. of Watertown, Wis., in its 1921 honey crop report, issued August 1, reaches certain conclusions which should be of interest to every honey producer. In a foreword, the report states: "These reports appear to be reasonably accurate considering their narrow scope, and are at least indicative of local conditions in a widely scattered territory."

Following are the conclusions reached:

1—The 1921 honey crop so far harvested based on these figures, appears to be about 39 per cent of normal, taking the country as a whole.

2—The per cent of the total average crop still in prospect July 25, 1921, appeared to be 39 per cent.

3—Condition of bees generally seems 88 per cent of normal.

4—Of the total crop expected about 30 per cent seems to be comb-honey.

5—Of the total crop expected about 70 per cent seems to be extracted honey.

6—Producers appear to be receiving 72 per cent of last year's price for comb-honey. (We believe this is a little too high a report to accept as a basis for the country as a whole.)

7—Extracted honey seems to be bringing about 58 per cent of 1920 prices.

8—Producers seem asking an average of 25 cents per section for comb-honey. (This report on direct sales to customer.)

9—Producers seem asking an average of 21 cents per pound for extracted honey. (This report on direct sales to customer.)

10—Apparently the crop was decreased at least 8 per cent by disease and pests.

REPORTS from 12 railroad agricultural departments show a big fruit crop depreciation this year. With increased advertising and a fruit shortage, honey should move well at fair prices by cold weather. Our industry should then stabilize faster than many other agricultural lines, in recovering from post-war conditions.

The Georgia State Beekeepers' association held a very successful three-day short course followed by a convention, starting August 19, at Macon. J. J. Wilder, well known beeman of Waycross, is president of the association, which was organized only last April. A somewhat smaller honey crop from Georgia is forecasted by association officers.

## 3-Banded Queens --- PACKAGE BEES --- Golden Queens

We are now booking orders for 1922 delivery. Let us know your needs and get our best prices; safe delivery and satisfaction guaranteed.

It is with pleasure we thank our many friends for their kind patronage in the past and at the same time we look with pleasant anticipation to the future. Our desire is to yearly give better service as well as a higher quality of queens and bees.

Have no more queens to offer for 1921 delivery.

**M. C. BERRY & CO.**

Hayneville, Ala., U. S. A.

## Annual White Sweet Clover Seed

(JAMES OR ALABAMA STRAIN)

Start right. Buy your seed from the home of this New Plant.

This clover was discovered growing in Alabama by our Mr. James in 1919.

Our crop this year was harvested without rain, and we can furnish a very high grade of seed, absolutely pure, grown by us on cultivated lands.

We are offering a limited supply at \$2.00 per pound delivered. These will be clean, hulled, scarified seed. Germination test must please you. Write for further information as to how to grow, etc.

**F. A. JAMES CLOVER SEED CO.**

NEWBERN, ALABAMA

## *Little Notes of the Industry*

Does any reader know of anyone importing bees from Italy at this time? An inquirer from Ohio writes that he has not been able to get queens here from Italy alive, and wants to know if anyone else has.

Mrs. L. B. Slade of Mitchell, S. D., writes: "This has been a wonderful season for the bees. With 26 colonies, spring count, increased to 42 this season. We will have two tons or more of honey, some hives making over 200 sections of comb-honey." And she added: "We cannot get along without your valuable paper."

From the Bureau of Entomology, Washington, we have received a copy of Farmers' Bulletin No. 1198, on "Swarm Control," written and compiled by Geo. S. Demuth. This bulletin is for free distribution and may be obtained upon request from the Division of Publications, U. S. Department of Agriculture, Washington, D. C.

During the last month many state associations have held their annual summer and field meetings. Attendance has been large and interest high.

B. J. Kleinhesselink of Hardin, Mont., has been appointed state inspector of apiaries. Montana is divided into 16 beekeeping sections, with Billings probably the center of the state's industry. The new inspector is also vice-president of the state beekeepers' association.

New Hampshire beekeepers held their summer meeting August 17 at the state college at Durham. Allen Latham of Norwich, Conn., was the principal speaker. Visits were made to several large apiaries near Durham.

Kansas seems an exception to the rule of decreased production this year, several apiarists being quoted as saying this is the greatest year ever known for honey production.

The Northern New York Honey Producers' association held its annual meeting, combined with a picnic, at Campbell's Point August 11. About 100 persons were in attendance. George H. Rea of Cornell university, was a speaker.

Ohio beekeepers turned out in force for the annual summer meeting held August 19 and 20 at Ashtabula. A splendid program was on tap.

Wisconsin reports a slight decrease in the expected honey crop for this year. There is a big increase in number of colonies, but the yield per colony is low.

Here's a pretty good one from Texas: "I am certainly glad that you are going back to the old name for your paper, as I never could understand just why it was changed to the Domestic Beekeeper. Unless the party who made the change considered the rest of us as savages or wild beekeepers. That being the case, we just overlooked his meaning and I for one certainly welcome the old name."

Dr. E. F. Phillips, of the entomology department, Washington, was the principal speaker at the 46th annual convention of the Vermont Beekeepers' association, held August 23 at North Ferrisburg.

## **SOME LESSONS LEARNED**

(CONTINUED FROM PAGE 9)

as much as possible, an abundance of stores is provided every fall.

### **Requeening**

Another operation which was made at the time the light honey crop was taken off, was to requeen each of the demonstration colonies with a young, untested Italian queen. This, together with the saving of twenty-five pounds of honey for each colony, were manipulations which had no bearing on the 1920 crop, but were the first preparation for the 1921 crop.

The fifth visit was made to each apiary at about the time of the first frost, and before there had been many cool nights. At that time all the shallow supers were removed, and the presence of a queen ascertained in each colony. Where it was estimated that any colony had less than thirty pounds of honey in the brood-chamber, enough combs of honey were taken from the extra hive bodies to make up the deficiency. The queen-excluders were removed. The extra hive bodies were then placed over their respective brood-chambers. Every extra hive body contained at least twenty-five pounds





# ATTENTION BEEKEEPERS



***Southern Headquarters for Beekeepers' Supplies***  
***Everything for The Beekeeper***

## NOTE THESE PRICES

Airco Fdn. 82c lb., 100-lb. lots.....	\$ .70
Hoffman frs. (Root), crate of 100, \$6.72; 1,000 or more, \$6.25; 100 or more crates	5.70
16-oz. jars, 24 to re-shipping case, \$1.60; 100 or more cases.....	1.45

## "HONEY CANS"

### ALL NEW

2 5-gal. 60-lb. cans, 1 $\frac{1}{4}$ in. cap. Cs of two,.....	\$ 1.40
100 or more cases, per case .....	1.25
Special prices on larger quantities or carlot.	
100 5-lb. cans to crate.....	7.75
200 5-lb. cans to crate (per 1,000, \$75.00).....	15.25
100 10-lb. cans to crate (10-lb. cans per 1,000 \$116.00).....	11.75

### SQUARE CORNERED OBLONG CANS

#### The Best Way to Pack Your Honey—A Fancy Package

$\frac{1}{4}$ gal. oblong cans, 3-lb. screw top, seals and gaskets, per 100 .....	\$13.00
$\frac{1}{2}$ gal. oblong cans, per 100 .....	15.50

## "HIVES"

#### The Best Made—At Better Prices for the Southern Beekeeper

Root, 10-fr. Cr. of five, metal cover, complete frs. K. D.....	\$18.00
100 or more crates of five, K. D. ....	16.26
Root Bee-shipping cages and queen cages at discount of .....	35 %

#### Supplies of All Kinds at Bargain Prices

### CYPRESS HIVES

#### One-piece Covers—The Best Cover Made

Cypress hives, 10-fr. complete, crate of five, K. D.....	\$15.00
100 or more crates of five, K. D. per crate.....	13.00

## WRITE FOR OUR CATALOGUE

Get Our Prices. Southland Service is Lightning Quick. Southland Quality is Root Made Goods. Special Prices, Large Orders or Discount on Your Years Business

OUR MOTTO: LARGE VOLUME—SMALL PROFIT

# *The Southland Apiaries*

Box 585, Hattiesburg, Miss.

of honey, or the equivalent of five Langstroth combs full. The colonies were then packed in four colony cases and left for winter.

In order to determine whether the management of the demonstration colonies increased the honey crop, other colonies in the same apiaries were run by the owners, much on the let-alone plan. These colonies were termed "check" colonies.

The following table gives a summary of the season's results:

Location of Apiaries	No. of Demonstra- tion Colonies	Total Production of Dem- onstration Colonies, lbs.	Average production Dem- onstration Colonies, lbs.	Number of Check Colonies	Total Production of Check Colonies, lbs.	Average production per Check Colony, lbs.
Council Bluffs, Pottawattamie County .....	5	1049	209	14	1174	84
Malvern, Mills County .....	3	500	166	1	28	28
Fonda, Poca- hontas County .....	5	543	108	2	96	48
Iowa City, John- son County .....	5	165	33	1	30	30
Mt. Pleasant, Henry County .....	5	300	60	5	250	50
Milton, Van- Buren County .....	5	125	25	2	40	20

The production figures of the demonstration colonies were obtained after each colony had at least thirty pounds of honey in the brood-chamber, and twenty-five pounds in the extra hive body. The production of the check colonies includes all the honey stored above the brood-chambers.

In the spring of 1920, both demonstration and check colonies were approximately the same strength, as they did not receive the demonstration management the previous fall. The fall is essentially the beginning of the beekeepers new year. Colony manipulations left undone at that time cannot be made in the spring to obtain the maximum working force in localities where the winters are severe, and the main honey flow comes early in the season.

#### Fundamentals Few

The more favorable results obtained by the demonstration over the check colonies can be attributed to three things—one, the use of the extra hive body for brood-rearing, previous to

the honey flow; two, the control of swarming; three, the production of honey in shallow extracting supers instead of in comb-honey sections.

The value of swarm control was very plainly demonstrated. The honey flows in the first three locations given in the table were particularly good, and swarming was very intense. All the check colonies swarmed at least once. In the last three locations given in the table, the honey flows were such that there was but little swarming, thus the contrast between the demonstration and check colonies was not as great. In all six yards the demonstration colonies had to draw out all the comb in the extra hive bodies and shallow supers. The check colonies had the comb to build only in the sections.

#### HIGH LIGHTS IN GOVERNMENT

##### REPORT OF AUGUST 16

**Central States:** Ohio seems to enjoy about the best crop of honey in the country this year, good in quality as well as quantity. Wisconsin may have a light fall flow as a result of recent rains, but the present outlook for the state is for a 25-30 per cent crop. Colonies are breeding up to good winter strength of young bees. The drouth has also affected the crop of other northern states materially. Demand good for small lots, but slow for large lots.

**Middle Atlantic Section:** Present outlook is encouraging for a large yield in Pennsylvania from buckwheat and clover. Very little stock held over from last year. Colonies in Pennsylvania are said to be in good condition.

**Northeastern Section:** Bees are in generally good condition, but the honey crop is only fair. In some important honey producing sections of New York state the outlook is even poor, and an estimate for the state of 50 per cent is made by several observers. The drouth has also very seriously reduced the crop in Vermont.

**California Points:** Supplies of old crop light, of new crop moderate. Prospects are good in northern California, but in the southern part of the state the early dry spell was not compensated by the later rains, and perhaps one-third of a crop may be looked for.

**Southern United States:** Where recent rains have been abundant, a good fall flow is expected, but in many sections the drouth has not been much relieved by rains and little encouragement is given for the fall. Colonies are in normal condition in most districts.

## CLASSIFIED DEPARTMENT

Advertisements under this heading will be inserted at the special rate of 10 cents per line per insertion, average eight words per line. Minimum charge, 50 cents per issue. Cash must accompany order, as amounts are too small to warrant bookkeeping.

### BEEES AND QUEENS

**BEEES AND BEE FARM FOR SALE**—75 colonies of three-band Italian bees, and full equipment for producing extracted honey. Two ton clover-raspberry honey with place if wanted. If interested write me. Advanced age and poor health reason for wanting to sell. JOHN A. STEVENS, Mio, Mich.

**FOR SALE**—Price \$1.50, tested queens, young and prolific, the kind that keep your brood-chambers full of honey. I send out no other kind. No complaints, but many words of praise. Satisfaction guaranteed or your money refunded without a word. O. P. HENDRIX, West Point, Miss.

**BOOK YOUR ORDER for finest Golden Italian Queens** It is worth hundreds of dollars for beekeepers to get them at these low prices: One, untested, \$3.00; tested, \$4.00. Guaranteed shipments start latter part May to October. No disease. Frank Skipala, Box 111, Woodbine, N. J.

**HIGH GRADE ITALIAN QUEENS**—Pure mating. Safe arrival and satisfaction is our guarantee. A card will bring our 1921 catalogue and price list. JAY SMITH, Route 3, Vincennes, Ind.

**QUEENS, BEES BY THE POUND**—Booking orders now. Guarantee shipment to be made on time. FREE circular explains. NUECES COUNTY APIARIES, Calallen, Texas. E. B. Ault, Prop.

**SHE-SUITS-ME QUEEN BEES**—Prices for 1921: May 15 to June 15 inclusive \$2, ten or more \$1.75 each. After June 15, one to nine \$1.50 each, 10 to 24 \$1.40 each, 25 and up \$1.25 each. 3-band Italians. ALLEN LATHAM, Norwichtown, Conn.

**MOTT'S NORTHERN BRED ITALIAN QUEENS**—Select untested, \$1.25 each; \$15.00 per dozen. Select guaranteed pure, or replace, \$1.50. Select tested, \$2.50 each. Plans "How to Introduce Queens, and Increase," 25c. E. E. Mott, Glenwood, Mich

**1000 PURE THREE-BAND ITALIAN QUEENS** for sale. These queens are now heading full colonies of bees, are very prolific and well mated, from one to three months old. On account of checking brood-rearing, we will ship as long as they last at \$1.00 each. Safe arrival and no disease guaranteed. Dr. White Bee Co., Sandia, Texas.

**FOR SALE**—Three-banded or Golden Italian Queens, untested only. One, \$1.25; six, \$7.00; dozen, \$13.00. All queens reared in strong colonies and mated in strong nuclei. Sure to please. Safe arrival and satisfaction. Ross B. Scott, LaGrange, Ind.

**ITALIAN QUEENS**—Three-banded, select untested, guaranteed. Queen and drone mothers are chosen from colonies noted for honey production, hardiness, prolificness, gentleness and perfect markings. We are running 300 nuclei in one yard for queens as above described, also in another yard, 7 miles distant, we are running 200 nuclei for a special strain of goldens, which are hardy, prolific, gentle, and great hustlers. Price \$1.25 each; one dozen or more, \$1.00 each; fifty or more, 90c each. J. H. Haughey Co., Berrien Springs, Mich.

**WE ARE BOOKING orders for Pure Italian Queens**, Doolittle strain, for delivery on and after April 1. For honey gathering, gentleness, color and size they are unequalled. We guarantee pure mating, safe delivery, and satisfaction. Just try us. Paradise Apiaries, Scottsdale, Ariz.

**GOLDEN ITALIANS**—Two-pound package of Golden Italian bees \$4.75; 10 or more \$4.50 each. One untested queen \$1.50; 10 or more \$1.25 each. One tested queen \$2.50; 10 or more \$2.25 each. No disease of any kind. Safe delivery guaranteed. 20 per cent must accompany order. Circulars. J. E. SUTTON, Linden, Ala.

**FOR SALE**—A limited number of choice tested leath-colored Italian queens, at \$1.50 apiece August 1. J. W. STINE, Route 4, Burlington, Iowa.

**HARDY ITALIAN QUEENS** in Thompson safety introducing cages. Day-old, any number, 50c each; untested, \$1.00. Package bees and queens for 1922. Write for prices and discounts on orders booked now. JAMES McKEE, Riverside, Calif.

**HARDY ITALIAN QUEENS**, \$1.00 each. W. G. LAUVER, Middletown, Pa.

**QUEENS**—3-banded Italians \$1.25 each; \$12 for 12. J. D. KROHA, 87 North St., Danbury, Conn.

**SAVE QUEENS** by using "All Right" Push-in Comb Introducing Cage. 25c postpaid. O. S. REXFORD, Winsted, Conn.

### HONEY WANTED

**FOR SALE**—8,000 lbs. finest quality clover extracted honey. State quantity wanted. Will put up to suit the trade. Sample 20c, to apply on first order. C. H. Hodgkin, Rochester, Ohio.

**QUICK CASH** for comb and extracted. Send sample or describe and say how much and price. BRUNER, 3836 No. Kostner Ave., Chicago.

**HONEY WANTED**—Extracted white clover, clover raspberry or raspberry milkweed, in large quantities. Send sample and lowest price. C. M. DREGER, 244 W. 106th Place, Chicago, Ill.

### CAVIES

**CAVIES** (Guinea Pigs) are needed by the thousands daily by laboratories; a handsome profit offered for raising them. Write MAPLE ROW CAVY FARM, for full particulars and prices on breeding stock. Glenwood, Michigan. Prices reasonable. Stock guaranteed to be satisfactory.

### MISCELLANEOUS

**PATENT FOR SALE**—New Beehive, pat. Feb. 22, 1921, the one beekeepers will be pleased with. Write to this address: DMYTRO PODHAJNY, Box 11, Algoma, W. Va.

## BEES FOR SALE

### GOLDEN AND 3-BANDED ITALIAN BEES

(The kind that fill from two to six supers)

In eight and ten frame hives at \$12.00 and \$15.00 each. Bees shipped by express.

Queens After May 1st

Orders booked now with part payment.

Price of Queens: \$2.00 each; \$11.00 for 6; \$45.00 for 25

Also have comb-honey for sale at \$3.25 per case of 12 boxes

Extracted Honey \$2.50 for 10-lb. Pail

Poland China Pigs \$15.00 each

Single Comb R. I. Red Eggs for Hatching  
(280-egg Trapnested Strain)  
\$2.50 per 15, \$12.00 per 100

Reference: "National Citizens' Bank"

**Miss Lulu Goodwin**

Lock Box No. 294  
MANKATO, MINN.



### 3-Banded Queens --- PACKAGE BEES --- Golden Queens

We are now booking orders for 1922 delivery. Let us know your needs and get our best prices; safe delivery and satisfaction guaranteed.

It is with pleasure we thank our many friends for their kind patronage in the past and at the same time we look with pleasant anticipation to the future. Our desire is to yearly give better service as well as a higher quality of queens and bees.

Have no more queens to offer for 1921 delivery.

**M. C. BERRY & CO.**

Hayneville, Ala., U. S. A.

### Annual White Sweet Clover Seed

(JAMES OR ALABAMA STRAIN)

Start right. Buy your seed from the home of this New Plant.

This clover was discovered growing in Alabama by our Mr. James in 1919.

Our crop this year was harvested without rain, and we can furnish a very high grade of seed, absolutely pure, grown by us on cultivated lands.

We are offering a limited supply at \$2.00 per pound delivered. These will be clean, hulled, scarified seed. Germination test must please you. Write for further information as to how to grow, etc.

**F. A. JAMES CLOVER SEED CO.**

NEWBERN, ALABAMA

## QUEENS

## Package Bees

## QUEENS

### Full Colonies and Nuclei

Our bees are hustlers for Honey, Prolific, Gentle, Easy to handle. For years we have been shipping thousands of queens and pounds of bees all over the U. S. A. and Canada. We are continually getting letters saying as follows, "Well pleased with your stock, best we ever had. The bees we got from you are the tops (best) of our 225 colonies. Bees arrived in fine shape, well pleased, etc., etc." Write for free circular giving details.

We are quoting a lower price for balance of the year but holding up the high standard of Quality First.

### Queens After July 1st, Balance of the Year

Untested.....	\$1.35 each, 25 or more	\$1.00 each
Select Untested.....	\$1.50 each, 25 or more	\$1.25 each
Tested.....	\$2.25 each, 25 or more	\$1.75 each
Select Tested.....	\$2.75 each, 25 or more	\$2.00 each
Breeders .....	\$5.00 to \$15.00	

1 pound package bees \$2.25 each, 25 or more \$2.13 each

2 pound package bees \$3.75 each, 25 or more \$3.56 each

3 pound package bees \$5.25 each, 25 or more \$4.98 each

Add price of queen when ordering bees. Safe arrival guaranteed within 6 days of here.

## NUECES COUNTY APIARIES

E. B. AULT, Prop.

Calallen, Texas

## QUEENS

## Bees by the Pound for 1922

## QUEENS

You who have tried our bees and queens know their good qualities. Those who have not tested them we suggest their giving us a trial order. Our thousands of satisfied customers testify to their superior traits. We are now booking orders for 1922 delivery, 10 % cash with order. No disease, safe arrival and satisfaction guaranteed.

### Packages by Express

1-lb. pkgs. with queens each	\$4.00, 12 or more, each.....	\$3.75
2-lb. pkgs. with queens, each	\$5.50, 12 or more, each.....	\$5.00
3-lb. pkgs. with queens, each	\$7.25, 12 or more, each.....	\$6.75

By Parcel Post 10 % extra on above

1½-lb. pkgs. Canadian Special with queens by mail, each.....	\$5.00
Select untested queens, each \$1.50, 12 or more, each.....	\$1.40
Select tested queens, each \$3.00, 12 or more, each.....	\$2.75

We do not guarantee safe arrival on bees going to Canada by express. The largest sized packages we can ship by mail to Canada is the 1½-lb. size as per above.

## M. C. BERRY & COMPANY

Hayneville, Ala., U. S. A.

# LYNCHBURG AND "BEEWARE"

For the benefit of beekeepers in the Southeast and to answer an ever increasing demand from the beekeepers of that territory, the branch of the G. B. Lewis Company has been moved from Law-  
yers to Lynchburg, Virginia.

Lewis workmanship, "Beeware" quality and Lynchburg shipment will be three of a kind. Call and see us at Thirteenth and Commerce Streets, Lynchburg, Virginia.



## G. B. LEWIS CO.

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